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THE ARCHITECTS' & BUILDERS' JOURNAL.

A Weekly Journal for Architects Surveyors Builders and Constructional Engineers.

It is our aim, our ambition, our aspiration even, to build our Journal worthily and well, not for the hour only, but for future years; for the few men in the forefront of an enduring and a laborious art; for the disciplined ranks of a distinguished profession; for the young men—Architects to be—and for all who love a clustered column or a flying buttress, a traceried window or a Greek frieze; for the man, too, who honestly plumbs a jamb.

TECHNICAL JOURNALS, LTD.,
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LVIII.—Florence Nightingale Memorial, Liverpool. Willink and Thicknesse, FF.R.I.B.A., Architects. May 6.
LIX.—British Museum Extension, Montague Place, London: Detail of Facade. John J. Burnet, LL.D., Architect. May 13.
LX.—Lincoln Free Library. Reginald Blomfield, R.A., P.R.I.B.A., Architect. May 20.
LXI., LXII.—No. 7, St. James's Square, London: Façade: Detail of Porch and Entrance. Edwin Lutyens, A.R.A., F.R.I.B.A., Architect. May 20.
LXIII.—Moorgate Hall, Finsbury Pavement, London, E.C. Richardson and Gill, Architects. May 27.
LXIV.—St. Anselm's Vicarage, Kennington, S.E. Adshead and Ramsey, Architects. May 27.
LXV.—Belfast Art Gallery and Museum Competition: First-Premiated Design. James Cumming Wynnes, Licentiate R.I.B.A. May 27.
LXVI.—Altar in St. Pancras Church, London. H. Percy Adams and Charles Holden, F. and A.R.I.B.A., Architects. June 3.
LXVII.—Prince of Wales Picture House, Clayton Square, Liverpool. George L. Alexander, A.R.I.B.A., Matthew Watson, Lancless and Pearse, Architects. June 10.
LXVIII.—New Premises for the Bosch-Magneto Co., Ltd., Tottenham Court Road, London. Hobden and Porrie, Architects. June 17.
LXIX., LXX.—Théâtre des Champs Elysées: Main Elevation; Proscenium of Music Theatre. A. and G. Perret, Architects. June 24.

EARLY XIXth. CENTURY ARCHITECTURE I.

V.—Pentilly Estate Office, near Callington. Cornwall; House in Doyle Road, St. Peter Port, Guernsey. January 21.

MODERN AMERICAN ARCHITECTURE.

I., II.—Building for Guaranty Trust Co., New York: Main Elevation; Detail of order. York and Sawyer, Architects. February 11.
III.—Monument to "Heroic Dead of Fire Department," New York. H. Van Buren Magonigle, Architect. February 18.
IV., V.—Black, Starr, and Frost Building. New York. Carrère and Hastings, Architects. March 4.
VI.—New York Court-House Competition: Outline Perspectives of six leading Designs. March 25.
VII.—Minnesota State Capitol. Cass Gilbert, Architect. March 25.
VIII.—Bedroom in House of Mr. James B. Duke, New York City. Horace Trumbaeur. May 13.

MODERN DOMESTIC ARCHITECTURE.

XVI.—Mount Lodge, Townsend Road Harpenden. Denis M. Wilson, Architect. January 7.
XVII. Houses in Corringham Road, Hampstead Garden Suburb. Barry Parker and Raymond Unwin, FF.R.I.B.A., Architects. January 14.
XVIII.—Pair of Cottages, Cricket St. Thomas, Somerset. Clough Williams-Ellis, Architect. January 21.
XIX.—"The Thatched Cottage," West Byfleet, Surrey. G. Blair Imrie, Architect. January 28.
XX.—"Amersfort," Berkhamsted. Ernest Willmott, F.R.I.B.A., Architect. February 4.
XXI.—"Blakemore End," Little Wymondley, Stevenage, Herts. A. Needham Wilson, A.R.I.B.A., Architect. February 11.
XXII.—Horn Park, Dorset. T. Lawrence Dale, A.R.I.B.A., Architect. February 18.
XXIII.—No. 84, Harley Street, London. Claude W. Ferrier, Architect. February 25.
XXIV., XXV.—Rebuilding of the Duchy of Cornwall Estate, Kennington, S.E.: Flats, Upper Kennington Lane: Flats, Chester Street. Adshead and Ramsey, Architects. March 4.

MONUMENTAL ARCHITECTURE.

VII.—Design for an International World Centre. Ernest M. Hébrard, Architect. January 28.
VIII.—International World Centre: "Tower of Progress." Ernest M. Hébrard, Architect. February 4.
IX.—The Four Courts, Dublin: Centre of River Front. James Gandon, Architect. February 18.
X. The Academy, Athens. Theophilus Hausen, Architect. February 25.
XI.—The Garibaldi Gate, Milan. March 11.
XII.—Chambre des Députés, Paris: Salle des Séances. Jules de Joly, Architect. March 18.
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XIV., XV.—Bank of England: Stock Office; Scala Regia, House of Lords. Sir John Soane, Architect. April 8.
XVI., XVII.—Dulwich Picture Gallery; Designs for Trinity Church, Marylebone Road, London. Sir John Soane, Architect. April 15.
XVIII.—Design for a Tomb. Sir John Soane, Architect. April 22.
XIX. The Great Hall, Euston Station, London. Philip Hardwick, Architect. May 6.
XX. Caledonia Road Church, Glasgow. Alexander Thomson, Architect. May 13.
XXI. The British Museum, London. Sir Robert Smirke, R.A., Architect. May 27.
XXII. The Propylaea Gates, Munich. Von Klenze, Architect. June 17.
XXIII.—The Hall of Fame, Munich. Von Klenze, Architect. June 24.

NEO-GREC DETAIL.
XI.—Detail of Doorway in Vestibule de Harlay, Palais de Justice, Paris. J. L. Duc, Architect. January 28.
XII.—Ceiling, Gilmour Hall, Students' Union, Liverpool. Professor C. H. Reilly, M.A., F.R.I.B.A., Architect, February 4.

XIXTH. CENTURY FRENCH ARCHITECTURE.
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II., III.—Pavillon Turgot, the Louvre, Paris: Façade and Detail. Louis Visconti, Architect. February 4.

PALACE INTERIORS.
I.—The Bow Saloon, Buckingham Palace. February 11.
II.—Escalier d'Honneur, Compiègne. Gabriel, Architect. February 25.
III.—Buckingham Palace: The Throne Room. March 4.
IV.—Compiègne: The Vestibule. Jacques-Ange Gabriel, Architect. March 11.
V.—Compiègne: :Salon des Dames d'Honneur. Jacques-Ange Gabriel, Architect. March 18.
VI.—Compiègne: Galerie des Fêtes. Jacques-Ange Gabriel, Architect. March 25.
VII.—Buckingham Palace: The Marble Hall. April 22.

PALAIS DE JUSTICE, BRUSSELS.
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I.—Front Elevation. March 11.
II.—Longitudinal Section. April 1.
III.—Detail of Main Entrance. May 6.
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BY R. IVESON DENHAM AND L. ST. G. WILKINSON.
COUNCIL SCHEMES.
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„ 2 .... April 22.
„ 3 .... April 29.
„ 4 .... May 6.
„ 5 .... May 13.
„ 6 .... May 20.
„ 7 .... May 27.
„ 8 .... June 3.
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„ 2 .... June 17.
„ 3 .... June 24.

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I.—"The Wick," Richmond Hill, Surrey. March 18.
II.—House at Kennington, S.E. April 1.
III.—House on Champion Hill, London, S.E. April 8.
IV.—Surrey Lodge, Denmark Hill, London, S.E. April 15.
V.—Durlstone Manor, Champion Hill, London, S.E. April 22.
VI.—House at Herne Hill: Pair of Houses in Water Lane, Brixton. April 29.
VII.—"Woodbine Cottage," Petersham, Surrey. May 6.
VIII.—Pair of Houses at Cobham, Surrey. May 13.
IX.—White Lion Hotel, Cobham, Surrey. May 20.
X.—House at Cobham, Surrey. May 27.
XI.—Farm House at Cobham, Surrey. June 3.
XII.—Pair of Semi-detached Houses, Esher, Surrey. June 10.
XIII.—Pair of Houses, Quarry Street, Guildford. June 17.
XIV.—Cottages at Giggshill Green, near Esher, Surrey. June 24.

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III.—Temple of the Victorious Hercules. Compositions by M. Henri Mayeux. January 14.
IV.—Rome Scholarship in Architecture: Detail of Façade to a Civic Centre. Ernest Cormier. January 21.
V.—Design for a Monumental Building Commemorating Adoption of Greenwich Meridian. F. Jenkins. January 28.
VI.—Church of St. Mary-le-Strand, London. James Gibbs, Architect. C. H. Mason. February 4.
VII.—Design for a Beaux-Arts Exhibition Palace: Detail of Elevation. Emile Bénard. February 11.
VIII.—Rome Scholarship in Architecture: Design for a Civic Centre. Louis de Soissons. February 18.
IX.—Composition of the Ionic Order, Odéon. M. Duval. February 25.
X.—Rome Scholarship in Architecture: An Art Gallery in a Public Park. E. R. F. Cole. March 11.
XI.—Designs for a Concert Hall. M. L. Mace (Upper), and M. Adrien Chancel (Lower). March 11.
XII.—Rome Scholarship in Architecture: An Art Gallery in a Public Park. F. Jenkins. March 18.
XIII.—Design for a Building Commemorating the Universal Adoption of the Greenwich Meridian. B. A. Miller. March 25.
XIV.—Design for a Necroplis, by M. Henri Legrand. April 8.
XV.—Design for a Building Commemorating the Universal Adoption of the Greenwich Meridian, by E. R. F. Cole. April 15.
XVI.—Fontana di Trevi, Rome, by E. F. Lewis. April 29.
XVII.—Premises 40-44, Bath Street, Glasgow, by Frank R. Burnet. May 13.
XVIII.—Ionic Capital, Forum of Trajan (Grand Prix de Rome). A. Recouver. May 20.
XVIII. (a).—Design for a Monumental Fireplace. J. Burford. June 3.
XIX.—Temple of Mars Vengeur. B. Chaussemiche. June 10.
XX.—Design for a Monumental Fireplace. D. C. L. Derry. June 17.
XXI.—Corinthian Capital: Temple of Castor and Pollux at Cora. Emmanuel Brune. June 24.

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I., II.—Marble Vase on Pont Alexandre III., Paris. Gardet, Sculptor. April 29, May 6.
III.—Empire Vase in Grand Trianon, Versailles. June 3.
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XI.—King's College Hospital: Lecture Theatre in Medical School. William A. Pite, F.R.I.B.A., Architect. January 7.
XII.—National Museum of Wales, Cardiff: Details of Main Staircase. Smith and Brewer, FF.R.I.B.A., Architects. January 14.
XIII.—Cardiff Technical Institute: Angle of Façade. Ivor Jones and Percy Thomas, Architects. January 21.
XIV.—Doorway, Mason Library, Gt. Barrington, Mass., U.S.A. Blanchard and Barnes, Architects. January 28.
XV.—Building of the Guaranty Trust Co., New York. York and Sawyer, Architects. February 11.
XVI.—National Museum of Wales, Cardiff: Details Court Room Staircase. Smith and Brewer, FF.R.I.B.A., Architects. February 18.
XVII.—Gilmour Hall, Students' Union, Liverpool: Half Elevations of East and West Sides. Professor C. H. Reilly, M.A., F.R.I.B.A., Architec February 25.
XVIII.—Rebuilding of the Duch of Cornwall Estate, Kennington, S.E.: Detail o Flats in Chester Street Adshead and Ramsey Architects. March 4.
XIX.—Nottingham and Midlan Eye Infirmary: Detail o Façade. Arthur Marshall, A.R.I.B.A., Architect. March 18.
XX.—Cardiff Technical Institute: Details of Mai Entrance Door and Ve bule Doors, etc. Ivo Jones and Percy Thoma Architects. April 8.
XXI.—Main Entrance to Currie Hall, Williams College Williamstown, Mas John Oakman, Architec April 15.
XXII.—Cardiff Technical Inst tute: Detail of Mai Staircase. Ivor Jone and Percy Thoma Architects. April 22.
XXIII.—Gilmour Hall, Student Union, Liverpool: El vation of North End, et Professor C. H. Reilly M.A., F.R.I.B.A., Architect. April 29.
XXIV.—Entrance to Currier Hall Williams College, Wil liamstown, Mass, U.S.A John Oakman, Architec May 13.
XXV.—Usher Hall, Edinburgh Details of Steel Con struction of Dome Stockdale Harrison an Sons and Howard Thomson, Architect May 20.
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THE ARCHITECTS' & BUILDERS' JOURNAL.

JANUARY 7, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 992.

Classic Inspiration.

MR. MARCH PHILLIPPS has written another letter to the "Morning Post," entitled "Classic Inspiration," and, as usual, he displays all the wiles of a practised controversialist. He knows, for instance, that it is always a good thing to affect a great familiarity with one's opponent's case. He begins his criticism of the architectural profession by a eulogy of the Greeks. This is very clever indeed, and we are led to believe that his objection to Classic art is by no means due to a lack of appreciation of it; on the contrary, he considers that he understands it far better than our benighted modern architects, who "have sacrificed the spirit to the form of Classic art." Mr. March Phillipps is an artist in language, and he has described the virtues of Classic art with the utmost fluency. Of the Doric temple he says that it is "a visible incarnation of the spirit of intellectual lucidity which was the inspiration of Greek life. Here, in these structural forms, each existing for the sake of the others, and gaining its individual consequence and beauty from its relation to the whole, are visibly expressed in the language of art, and with a subtlety of articulation that months of analysis will not exhaust, the hatred of eccentricity and excess, the love of perfect symmetry and sweet reasonableness which were the governing principles of Greek philosophy," and again he speaks of "the old hatred of redundancy, the old perfect adaptation of means to ends, the old instinct for making every stroke tell, the old recognition of all that the word unity implies from the first stone to the last," as "everlasting principles," which can be assimilated through the study of Greek art. Magnificent words! But in the mouth of Mr. March Phillipps they are words only. He has learnt the vocabulary of Classicism, as any diligent student can, but he has not learnt its meaning; his language has the form of appreciation, but the spirit of appreciation is absent from it.

Now this is the test. Can he apply the same standard of criticism which is revealed in these sumptuous but borrowed phrases to a type of architectural structure different from that which originally called them forth? In his criticism of a Gothic church, for instance, does he display the faculty of vision with which he would undoubtedly be credited if his praise of the Doric temple were a spontaneous utterance? One can never be sure that a man really admires a thing until it is shown that he dislikes its opposite; every approval, if it is genuine, carries with it a correspondent disapproval.

If Mr. March Phillipps admires the everlasting principle of unity which is expressed in Greek art, why does he not condemn the work of our mediæval forefathers, in which this principle is so often disregarded? The virtues of rectangular architecture are easily described. There can always be a unity in the repetition of rectangular elements, because each part is suited to be a fraction of a whole, and, moreover, shares the characteristics of that whole. When round arches are repeated there is a unity of a lower kind, because each arch being so complete asserts itself at the expense of the whole; the effect in this instance is not a unity but a plurality, and if we wish to bind the whole façade together we must frame the arches in an order. The Romans knew this very well. But when we have to deal with pointed arches, and we are forbidden to use an order, it is quite impossible to obtain a unity; we have to rest satisfied with the placing of fragments side by side. In Classic architecture there are subordinate unities, such as the windows surrounded by architraves, on which the eye may rest with pleasure, but the Gothic window which exhibits the bleeding ends of two conflicting curves cut off at random is quite discrete and lacking in repose. The truth is that the pointed arch with the "upward tendency," so beloved of Mr. Phillipps, is utterly devoid of spiritual significance, and cannot be defended upon æsthetic grounds; it owes its origin to constructive necessity, and the Gothic builders were loth to employ it on account of its extreme ugliness. This is shown by the fact that the round arch was used in the window for some time after the pointed vault came into fashion. Eventually it was found necessary to fill the wall space between the vaults with windows. The result is that the distinguishing features of Gothic architecture were determined by quite temporary needs; and even the ornament, the quatrefoil and trefoils, are similarly conditioned. Can anybody wonder, then, that the Renaissance swept it out of existence? A man who hankers after these obsolete forms does not know what unity means.

Classic art is capable of absorbing all features that have permanent value. It has absorbed the dome, and also the spire and the tower, for these are eternal forms. The spire is the one contribution which our mediæval ancestors have made to that cosmopolitan style which is destined to come into being, for, unlike the pointed vault, it is an artistic conception and not an engineering necessity.

Mr. March Phillipps objects that we perpetuate the forms which the Greeks originated. One would imagine from this criticism that an altogether new type of creature had been evolved since the fifth century B.C., a creature that did not live in houses provided with windows and doors. The Greeks arrived at very satisfactory solutions of the problem these features represent, and it is waste of time to try to improve upon them. The people of our own day have rooms whose ceilings must be supported either by walls or columns; the Greeks created the most elegant, self-conscious columns, and, moreover, devised a system by means of which they could be grouped into a unity. We use the Classic archetypes because they are the product of intellect, and the nature of intellect does not change. To repudiate these archetypes is not advance but retrogression. Originality in architecture to-day can only take the form of designing larger and larger units. We are approaching the time when the artistic unit will not be the individual building but the city, a sensitive and complex whole instinct with social significance. We cannot copy from the Greeks either the plan of the city or the shape and disposition of its buildings, for the Greeks did not deal with our modern problem of civic design. But the Classic order is an eternal necessity, and if all examples of it were obliterated we should be compelled to create it afresh, and in very much the same proportions.

A. T. E.

The Society of Architects' Registration Bill.

THE draft of a Bill to provide for the Registration of Architects is now being circulated by the Society of Architects. We confess that we should take greater interest in the details of this capably constructed draft if we felt any real expectation that the Act would "commence and take effect from the first day of January, 1915," or within any conjecturable period of time; as it is, the sectional character of the movement, as we have previously pointed out, militates against the serious consideration of the Bill by an over-busy Parliament. However, the Bill's provisions may be summarised as follows: There will be created a "Council of Architectural Education and Registration of the United Kingdom," consisting of persons nominated from time to time by His Majesty with the advice of his Privy Council, and of architects chosen by the Councils of the R.I.B.A., the Society of Architects, and the Irish Royal Institute. Members of the Council shall be chosen and nominated for not more than five years, and other clauses provide for the election of a President, a Registrar, and other officers; the time and place of meeting of the Council, and the revision of its constitution when deemed necessary; the allowances to Councillors and the application of fees in payment for registration or from other sources; the publication of the Council's transactions and accounts; and the duties of the Registrar. The crux, of course, of the Bill is reached in Clause 19: "Persons qualified to be registered." The latter are to include Fellows, Associates, and Licentiates of the R.I.B.A., and professional members of the Society of Architects, together with any person practising as an architect in the United Kingdom and Ireland before January 1st, 1915, such person being required to sign a declaration on oath to that effect. There is also a form of declaration for apprentices, assistants, etc. Even at the present theoretical stage, the excessively liberal provisions of the Bill in regard to qualifications are sure to meet with strenuous opposition.

Wren and the Gresham Lectures.

ONE of Wren's several brilliant facets flashed momentarily upon us the other day at the opening of the new Gresham College, which has been built from designs by Mr. Dendy Watney and Mr. Sydney Perks, the City Surveyor. One of the speakers at the ceremony recalled that in 1657 Wren was appointed Gresham Professor of Astronomy. It was not at Gresham College, however, that Wren lectured—for the building that has now been superseded was not opened until 1843—but at the mansion of Sir Thomas Gresham, in the parish of St. Helen, on or about the spot where now stands Gresham House, which is one of many similar business blocks in this ntensely commercial quarter, and, housing hundreds of separate firms, is in itself no mean monument to the "royal merchant," as Shakespeare called him, who first organised commerce by founding the Royal Exchange, and who, being no narrow bigot of business, left provision in his will for the establishment of seven lecturehips—in divinity, astronomy, music, geometry, law, physics, and rhetoric. So facile was the scholarship of those days, and so well versed in it all was Wren, hat he might have assumed almost any of these ectureships; and that "uncommon genius" for mathematics which was discovered in him by his sister's husband, Dr. William Holder (who became a canon of St. Paul's), must have served him passing well in his xcursions into astronomy.

Panama-Pacific Exhibition Buildings.

A TOWER of Jewels, 425 ft. high; a Court of the Sun and Stars, 700 ft. by 900 ft., with a sunk garden and a large lake set in the midst thereof; five acres covered with glass in the interests of horticulture, a dome 150 ft. high signifying the same in the usual manner, but rather more so: these and other features of the Panama-Pacific Exhibition, which is to be opened in the spring of next year, do not, at first blush, seem to hold much promise for the advancement of architecture. Yet one never knows. Amidst all the meretricious glitter and grandiosity, of which it may be said, with more or less truth, "It is magnificent, but it is not architecture," there may be—in fact, almost certainly will be—revelations of effect that will survive the purposes of the passing show. In the present state of taste, it is too much to expect of an exhibition that it shall be, as a whole, an exemplar in architecture; but the tremendous scale, and the extraordinary stimulus of the occasion, certainly afford peculiar opportunities for expansion of vision, although it is not often that, as in the case of the Columbian Exhibition (Chicago) of 1893, which afforded an opportunity for the first time of bringing together in combination the artistic abilities of the leading architects of the United States, a definite impulse and a new direction are given to architecture. It is not evident from the forecast that the Panama-Pacific Exhibition will similarly widen the entire horizon; but it may very reasonably be expected to yield its quota to that better understanding of the grand manner which made the Columbian Exhibition so memorable an enterprise. It is as a spur to the imagination, and as an exhortation to courageous conception, that, from the architectural standpoint, a great exhibition is chiefly valuable; while, looking at it from a still more practical point of view, that is but a poor exhibition which is not the mother of many inventions.

A Word for Stucco.

AN amusing article in "Truth," entitled "The Stucco English," deals with the survival of stucco-covered houses in our London streets. Stucco, the writer thinks, is a hall-mark of the English character, a kind of national possession to which we cling instinctively, irrespective of its æsthetic attraction or practical usages; and, this being the case, he prophesies its indefinite continuance long after many of the un-stuccoed buildings have been pulled down. As we have often found occasion to say, we by no means share in this commonly affected contempt for stucco. Architects of the highest eminence have not disdained to use it. And it is admirable on the practical side. Its damp-resisting properties have been familiar to builders since the Ancient Greeks. By the latter and by the Romans it was of course used as extensively as by the makers of London. Vitruvius devoted pages to recipes for its preparation. In short, practically no civilisation has done without it. There is, then, at least no need to speak of it shamefacedly, as a dull thing fastened upon by English Philistinism for the monotonising of English streets. It can be turned to various and often beautiful uses.

Daylight Illumination.

DAYLIGHT saving by the theoretically simple but practically difficult expedient of more closely following the course of the sun in his risings up and his goings down is regarded as a matter for Parliamentary legislation; which, however, is likely to remain infertile. A more neglected, and hardly a less practically important subject—that of daylight illumination—will see a more fortunate issue if it is continuously treated in the spirit in which it has been taken up by Mr. Percy J. Waldram, who, in a paper read recently before the Illuminating Engineering Society, showed very clearly the necessity for studying the problem scientifically, and suggested several ingenious essays towards its solution. The author of the paper was "rather staggered to find that practically no rules exist which determine what width, height, and arrangement of glass area will afford adequate illumination for any given size of room," and it therefore becomes obvious what an enormous amount of time must be wasted in individual endeavours to work out a problem that, with respect to its basic factors, might be solved once for all. A condition precedent is, of course, the scientific ascertainment of data; and these appear to be more obscure than most of us had suspected. Once the principles are made clear, their application to the very variable conditions of building should be a comparatively easy matter, with probably some considerable modification of architectural ideas on fenestration, and almost certainly with much resultant economy of health and eyesight and a more precise determination of rights of light. Towards this consummation Mr. Waldram has made an important contribution.

Water-colour Galleries at the Victoria and Albert Museum.

WHEN the five water-colour galleries at the Victoria and Albert Museum are reopened a few weeks hence—they had remained closed for several years—the lighting effects of the new roof will attract considerable attention; nor will the architectural interest cease with inspection of the building, for among recent acquisitions are two water-colour drawings by Thomas Allom, showing a scheme for the architectural improvement of the banks of the Thames. Independently of the intrinsic merits of the painting as a work of art or as an architectural scheme, it affords further evidence that even as far back as some half-century ago there was clear and fairly general recognition that the banks of the Thames might be transformed from squalor to glory. Possibly the enormous expense of the Thames Embankment scheme has neutralised the effect of its example. Mr. Allom, who was born in 1804 and died in 1872, is described as "architect, topographical artist, and water-colour painter generally," and it will be interesting to note the extent to which he may have anticipated modern town-planning views as to Thames-side treatment.

An Edinburgh Controversy.

SIR ROBERT MAULE'S proposal to erect a glass building as a winter garden in Princes Street Gardens has brought a very hurricane of opposition. The feeling of local architects has been strongly aroused against the scheme, and some very plainly worded letters have appeared in the Press from men distinguished in the profession, including Sir Rowand Anderson and Sir Robert Lorimer with others such as Professor Baldwin Brown. As usual, a good few alternative proposals have been put forward. The most practical suggestion, as well as the most weighty opposition, comes from Sir Robert Lorimer. He proposes the site of the old gasworks, a few yards down New Street from the Canongate. This site has several economic and social advantages. Its adoption would not involve the disturbance of any existing building, and the area is sufficiently large for the part not occupied by the building to be laid out as an open space. Secondly, its proximity to the poorer quarter of the city would render it an ideal retreat and shelter for the "masses," for whom, if we understand aright, the Lord Provost intends it. We assume, as does Sir Robert Lorimer, that this is the class the Lord Provost has a mind to attract to Princes Street Gardens; though there are not wanting those who believe that the contemplated disfigurement of the gardens by the Mound is meant to catch not the poor native but the rich tourist.

A Superfluity of Cinemas.

A WORD of warning about picture palaces seems necessary. Their progressive popularity may be the undoing of many of them, and of almost as many architects and builders. It is obvious that they are becoming far too abundant; and a point of peculiar significance is that the average capital invested in them is becoming much smaller. Men of straw are speculating in them very freely, and, as a means of economy, often try to make the architect's and the builder's interest in them speculative also. In the present phase of the movement, it is folly to rise to the bait by consenting to await payment out of profits which in too many instances can never accrue. It is bad enough when the architect sacrifices merely his professional services; but if, as is sometimes the case, he allows himself to be persuaded to put actual money into an adventure which has now become distinctly precarious by reason of quite excessive competition, he lays himself open to a charge of recklessness, if not of absolute stupidity.

"SPECIFICATION," 1914.

THE publishers have pleasure in announcing that "Specification," 1914, is now ready. All the sections have been carefully revised, much new matter has been added, and several new illustrations have been included. The Special Articles contributed to the present volume are of exceptional interest. They include—"Planning the Suburban Middle-class House," by Mr. Edwin Gunn, F.R.I.B.A., who illustrates, by means of half a dozen typical plans, the more modern developments in comparison with Early Victorian examples; "Close Tenders, and How to Get Them," in which Mr. A. G. White draws upon his extensive outlook as general secretary of the National Federation of Building Trades Employers; "The Local Government Board's New Model By-laws," by Mr. H. D. Searles-Wood, F.R.I.B.A., who urges the desirability of establishing a tribunal of appeal from the decisions of local authorities on points relating to practice in the working of the building by-laws; "Builders' Hoisting Gear," by Professor Henry Adams, M.Inst.C.E., who summarises the chief facilities in this kind; "Modern Estate Buildings," by Mr. G. S. Mitchell, F.S.I., who, besides discussing in detail the general requirements on an up-to-date estate, adds a plan showing how farm buildings should be grouped; and "Architect, Builder, and Contractor," in which Mr. Paul Ogden, F.R.I.B.A., advocates the substitution of the day-work for the contract system. Other special articles of great value and importance are those contributed by Mr. W. H. Maxwell, A.M.I.C.E., Borough and Water Engineer of Tunbridge Wells Corporation, who writes on "The Year's Progress in Municipal Engineering," and on "The Present Position of the Road Problem," illustrating the latter with a series of about a dozen sketches of typical road sections of various periods, from the days of the Roman occupation down to the present time. In the Municipal Engineering section there is also an important special article on "Surveying Instruments and their Adjustment," by G. A. T. Middleton, A.R.I.B.A., and another on "Public Lighting"; while among the Miscellanea there are articles on "The Shop-Front Problem," "Waterproofing Processes," "Country House Lighting," "Lifts and Strong Rooms," and many others. The work has been thoroughly revised throughout; and in particular, the section dealing with reinforced concrete now becomes the most useful practical treatise extant on that important subject. A further most important new feature is a select Schedule of Prices, which, having been carefully prepared by an eminent quantity surveyor, affords a valuable means of comparison of costs of various methods and materials.

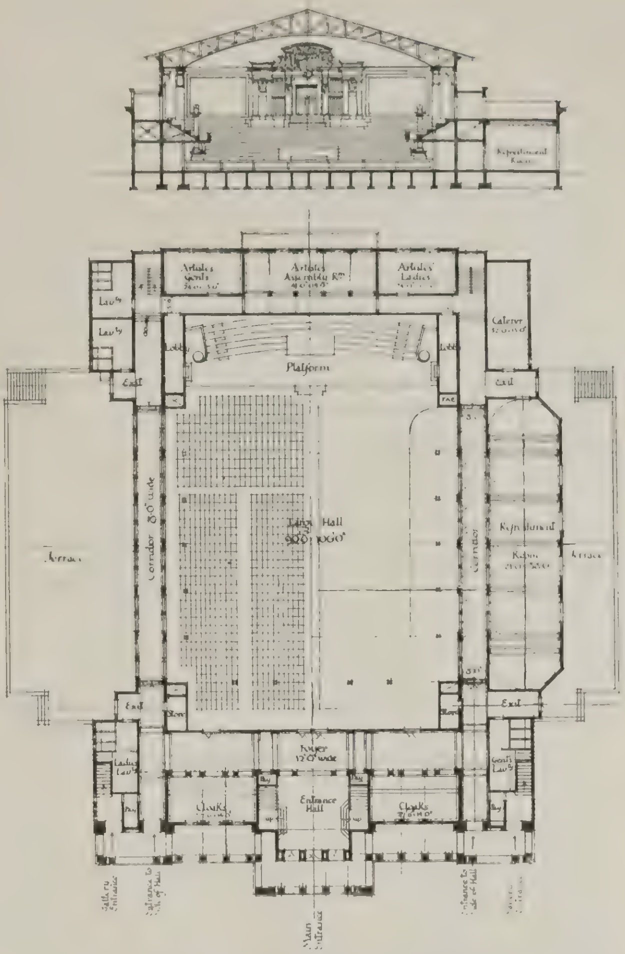
THE PLATES.

New York Municipal Building.

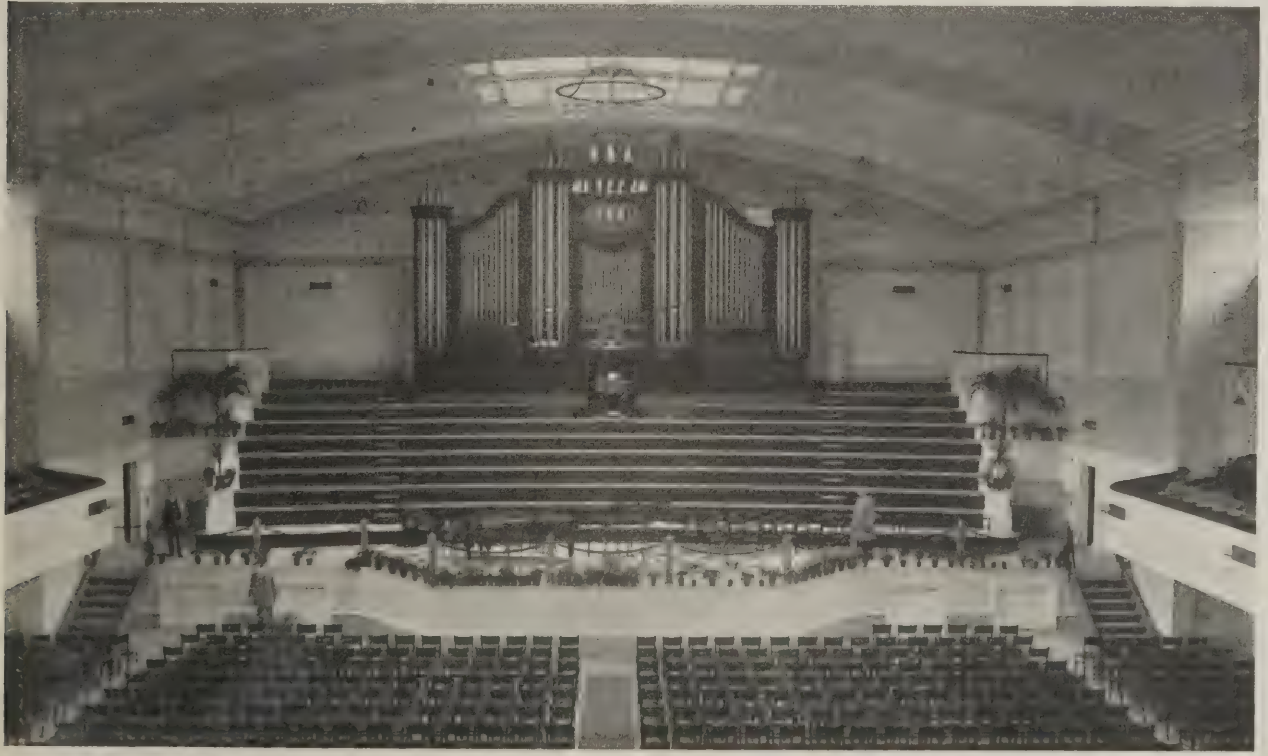
IT is curious how completely the first hostility to the American tall building has been allayed by repeated demonstrations that, after all, there is inherent in the monster a peculiar dignity to which architectural expression can be given. In the New York Municipal Building, of which we show two illustrations, the plan takes the shape of a wide U, the hollow of the U forming a court open on one side facing west. A screen of columns which crosses this opening connects the north and south pavilions, and the colonnade is continued practically all round the building. The total cubical contents of the building are 19,490,000 cub. ft., and there is a net office floor area of 648,000 sq. ft., while the granite required in construction was 750,000 cub. ft., and 26,000 tons of steel were used. The building, which is forty stories high, will house all the departments of the city government, excepting the police, fire, and a few minor departments. The total height from curb to top figure is 580 ft. Messrs. McKim, Mead, and White are the architects.

Leicester Public Hall.

The hall is rectangular in plan, with the main entrances facing the Victoria Park, and about 90 ft. from the present park fence. Adjacent to the main entrances are two side entrances for the approach to the front seats of the body of hall, and adjoining these are the two separate entrances to the back gallery, approached by fireproof stone stairs. At the lower level and facing Victoria Road are two entrances, one for the artistes and the other for the caretaker and servants. In other respects there are ample facilities for rapid egress or ingress. Internally the hall is 90 ft. wide by 144 ft. long, with the platform—4 ft. 6 in. above the main floor line—together with the orchestra and organ, filling up the end gable wall. The main floor is level, and is constructed of rift-sawn pitch pine. The main staircase from the foyer leads to the grand tier circle and flights of steps at the ends of the foyer lead to the promenade at the sides of the circle. The circle is well set back, and is steeper than the back gallery, in order to avoid a large projection over body of hall. There is a large room for refreshment and other purposes, 76 ft. by 21 ft., arranged in conjunction with the main hall on the Regent Road front. It is proposed to use the roof of this as a roof garden. The architects of the building are Messrs. Stockdale Harri-



NEW PUBLIC HALL LEICESTER: GROUND-FLOOR PLAN.



NEW PUBLIC HALL, LEICESTER. STOCKDALE HARRISON AND SONS, ARCHITECTS.

son, and Sons, and the main contractors Messrs. Haskard, Rudkin, and Beck. The cost is £15,500.

Arcaded Entrance to the Pavilion Marengo, the Louvre, Paris.

As an example of early nineteenth-century work in France this fine entrance, which was carried out under Napoleon I., is worthy of special study. There is a grace about it, coupled with dignity, which is very characteristic of French work.

Astoria Hotel, Avenue des Champs, Elysées, Paris.

This building is an example of modern French work in the classical style, freely treated, as will be seen, in the details of the façade, and perhaps typically Parisian in regard to the sculptural ornament. The arcaded façade to the fifth floor is a pleasant touch of audacity, justified by the total effect of the building. The architect is M. G. Rives.

House at Harpenden, Herts.

The aim of the plan of this house was the not unusual one of giving as much accommodation as possible for the money spent on building. The shape of the site also influenced the plan. The external walls are of brick, faced with plaster, with multicoloured local brick base and chimneys. The roof is covered with red sand-faced tiles, and the eaves soffit is of elm boards left unpainted. The remainder of the external woodwork is treated with "Carbolineum" throughout.

Working Drawing of Lecture Theatre, King's College Hospital.

We publish this week a working drawing of the lecture theatre in the medical school at the new King's College Hospital, Denmark Hill, London, S.E., now in course of erection from designs by Mr. William A. Pite, F.R.I.B.A. The theatre is a very interesting example of modern construction. The seats—for 145 students—are built up on a raking slab of ferro-concrete, supported on the side and cross walls. Stepped gangways up each side form approaches to the seats, and a passage-way in the centre leads down to the lecturer's room, preparation room, and diagram stores under the seats. A sunk platform is arranged centrally in the seating of the theatre for the epidiascope, an apparatus capable of reflecting on to the screen almost any object, photograph, or drawing. The seating will all be of hard wood, and a high dado of the same will extend round the walls. The theatre is lit by a large lantern light with flat ceiling light under, and the darkening blind is arranged to run on the upper surface of this, being actuated by concealed cords from the lecturer's table. The ventilation is by means of forced extraction through openings under the seats into an ingeniously arranged extract chamber connected by a large vent with a fan-house on the roof. Fresh warmed air enters through openings round the ceiling light and in the back wall to replace the vitiated air drawn off.

⁂ As in future the illustrations in this journal, in the majority of cases, will be from photographs of buildings, the Editors invite architects to submit photographs of their recent work. When the illustrations are given as full-page plates twenty-five copies on art paper will be sent to the authors. Architects will realise that many conditions, which may not occur to them, cover the selection of illustrations for a technical journal, and that when photographs are not used it does not necessarily imply that the work is not worthy of publication: it may happen that at the moment the illustrations do not fit in with the general scheme.

For convenience in filing them for future reference, a special portfolio for the plates has been prepared. All readers having, or placing, a standing order with a newsagent to supply the JOURNAL each week for twelve months can secure one of these portfolios free of all cost, by sending in an application to our offices at Caxton House, Westminster.

"WHO'S WHO IN ARCHITECTURE."

THERE has always been a peculiar fascination attaching to information of a personal nature. It may show the man apart from his work, it may throw a side-light on certain little peculiarities of his temperament, his methods, his likes and dislikes, or it may garnish the record with just those informative items which, in a few words, reveal the main achievements of his career. Such information has ever found a ready ear, in all circles and professions. Diarists like Pepys and Evelyn filled their pages with it; the letter-writers of later centuries, the compilers of memoirs and autobiographies—all drew from the selfsame well of personal interest; and the position remains unchanged to-day. In recent years, with the great advances made in the journalistic and publishing world, there has been a further development of the same field of interest, by the compilation of volumes that occupy a sort of mid-way position between the biography and the directory. In this respect the general public are already well served, but, strange to say, the professions have been left untouched, the profession of architecture among them. Recognising this, we have decided to meet what is undoubtedly a "want" by arranging for the early publication of a volume entitled "Who's Who in Architecture." The societies have their lists of members, and the directories give, more or less correctly, the names and addresses of architects in practice, but the information thus presented is of the baldest description, and quite devoid of all personal attraction. The volume which we have in preparation will be of vastly greater interest and value. It will give a succinct account of all the most notable men in the profession—their training, achievements, etc.—and not only of the leading men, but also of the many architects who have done important work without having had the attention of the profession directed to it. The book will also give addresses, telephone numbers, etc., and as the list of architects will be made a thoroughly comprehensive one, "Who's Who in Architecture" will thus fulfil a dual purpose—first as a personal record of members of the profession, and, secondly, as a complete list of architects practising in the United Kingdom.

In order that the desired information might be obtained in the most convenient manner possible, we have had a folio form prepared on which the particulars may be briefly set out. This form has been circulated among architects, a large number of whom have already returned it to us duly filled in; and we would ask those who have not done so to be good enough to supply the desired information and return the form to us at their earliest convenience, so that the volume may be completed. Some, perhaps, may regard their own achievements in a very modest way, and deem them hardly worthy of inclusion in such a volume; we would nevertheless urge them to send in their forms, even though the information given may be of the briefest character, as we intend to make a strong point of "Who's Who in Architecture" being really comprehensive in its survey, and complete in all its details. Obviously it will be a volume which every architect will need to have on his shelf, as it will contain information not to be found in any other publication, and will thus be a most useful book of reference.

The volume will be well bound in cloth, with gilt lettering, and, when published, the price will be 10s. 6d. nett: those, however, who now subscribe to it can secure a copy at the special reduced rate of 5s. 6d. nett, post free—an offer which a very large number of architects have already taken advantage of.

Any information concerning the volume, as well as forms to be filled in, and stamped addressed envelopes for their return to us, will be readily supplied on application to the Editor, "Who's Who in Architecture," Technical Journals, Ltd., Caxton House, Westminster.

HERE AND THERE.

THE Royal Academy Exhibition is months ahead of us yet, and it may seem very premature even to hint of its existence, but there is one glaring defect of the show which architects should continue to protest against, in season or out, until they get it remedied. I refer, of course, to the old question of photographic exhibits. We know that instead of being, as its name implies, an Academy "of arts," there is practically only one art represented —the art of the easel picture. Of the fifteen exhibition rooms, eleven have their walls covered with oil canvases; one serves to accommodate the water-colours and the miniatures; one—with the central hall thrown in—presents the astonishing spectacle of busts, medallions and sculpture huddled together in a manner that suggests the monumental mason's yard; a tiny corner room is apportioned to the etchings, drawings, and engravings; and another corner room, ostensibly doing honour to the art of architecture, has, by unwritten law, become recognised as a haven of rest, where the jaded visitor can sink on the central couch and enjoy an undisturbed snooze. For the moment, however, we will leave the question as to whether the Academy Exhibition should not endeavour to live up to its title. The matter at present before us is whether the Council should continue to refuse admission to photographs in the Architectural Room. I contend, out and out, that photographs should be admitted. In the case of the other arts represented, excepting sculpture perhaps, the exhibits are themselves the be and end all of the achievement. Mr. John Collier has finished when he hangs his canvas of "A Fallen Idol," and Mr. Shannon, Mr. Cope, Sir Hubert Herkomer, and the rest of the portrait painters have done their work when the last touch of the hog's-bristle has been dexterously laid on. But the architect's drawing, whether it be an elevational one or a gaily coloured perspective, is only a means to the end: the building itself is the achievement. As things stand, the drawings which are allowed to be the sole kind of representation in the Architectural Room can be easily divided into two kinds, both equally successful in failing to arouse the interest of the public. The half-dozen geometrical drawings which the Hanging Committee pass—or have to accept as having been sent in by R.A.'s and A.R.A.'s—are wholly unattractive to all but architects, while the perspectives are glanced over by the layman, and derided by the artist. Thus nobody is pleased with the show, and it is only persistent official obstinacy that prevents the room being made lively by photographs. We should never lose sight of the fact that the executed work is the goal of the architect, and as the actual house cannot be brought to the Academy the best alternative is to have a good photograph of it. Photographs of architecture have their limitations, like all other means of pictorial representation, but they get nearest to the ideal, and though they may make some buildings look better than they do in reality, and are unable to realise the sense of immensity that is experienced in such a place as Westminster Cathedral, the tricks they can play are fewer than the perspective artist has within his power to effect. This being so, why should the Academy persist in keeping photographs out of the Architectural Room? Simply because the rules of the august body were formulated at a time when photography had never been thought of, and a Council does not choose to live with the times. But what are the architect-members doing in the matter? Of the forty fauteuils, two are occupied by Sir T. G. Jackson and Sir Aston Webb—himself the Treasurer of the Royal Academy; and possibly there will be another architect R.A. in the place rendered vacant by the death of Mr. John Belcher: while the Associates include three extremely able and vigorous architects—Mr. Reginald Blomfield, Mr. E. L. Lutyens, and Mr. Ernest Newton. Let them get together and press for this much-needed reform of the Architectural Room. I believe they could get it carried, if they went whole-heartedly at it, and got the Institute to back them. The result would certainly be a vast improvement on the present arrangement. Architects themselves would gain a far better idea of the achievements of their fellow-workers in the profession, and I am certain the public would take a real interest in the exhibits. Such an unusual result would necessarily destroy the present value of the room as a sort of recuperating apartment after the turmoil in the galleries—a place where the tired eye-ball may refresh itself on areas of colour which may, incidentally, represent municipal buildings and country houses—but from the point of view of Architecture a distinct advance would have been made. I am not suggesting that fine drawings should not be warmly welcomed as before, but only that photographs should not be debarred.

* * * *

Shakespeare, in "As You Like It," has told us that we may, if we will, find sermons in stones, and although it is not my intention to suffuse over the lessons to be learnt from Monk's Park, or to draw a homily from the life-story of a block of Portland Whitbed, the phrase gives good literary precedent for indulging in a few notes on a foundation-stone. In the ordinary course of things, the foundation-stone recalls an occasion when some member of the community who knows nothing whatever of building makes a few delicate sweeps on some mortar with an exceedingly ornate trowel, and, having seen the block lowered, gives it a tap with a superb mallet, thereupon declaring the stone to be well and truly laid. But the foundation-stone to which I am now going to refer is no ordinary cube, and the manner of its use must take a prominent place in the history of such things. It was a block of Dartmoor granite and, as hewn at the quarry, weighed no less than twenty-three tons. This mighty stone was intended to be used as one of the pedestals of London Bridge, and it was brought up by water for that purpose. Unfortunately, however, it arrived too late, and so it was dumped down on the Isle of Dogs, where it remained for some years—a monolith which nobody wanted. About the year 1850 it was transferred to the wharf of Messrs. Freeman, stone merchants, at Westminster, and a chunk of it, weighing about seven tons, was cut off for use as a corner or foundation-stone in the "Times" newspaper building, Playhouse Yard, Queen Victoria Street. A goodly portion still remained. This was wrought into shape, weighing then about ten tons, and it now forms the plinth stone of the south-east abutment of the bridge that spans Farringdon Street, commonly known as Holborn Viaduct, though, properly speaking, the Viaduct across what was originally the Holborn Valley includes the bridge over Shoe Lane as well and the thoroughfare outside the terminus of the London, Chatham, and Dover Railway. And now that we are talking of this terminus, let me draw attention to the hotel façade an admirable piece of design with flat pilasters running up through several storeys and crowned by a good cornice. Hotel architecture in London does not give cause for much commendation—there are too many examples of the "free" treatment of the Renaissance, resulting in the Franco-or-Italiano-British-Portland-Cemento style of architecture: but there are a few exceptions, among them this façade of the Holborn Viaduct Hotel, by Mr. H. L. Florence, which should be accorded the praise it deserves.

UBIQUE.

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or opinions expressed by correspondents, who are asked to be brief, and to write on one side only of the paper.

The Registration Question.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—My suggestion for the solution of the present *impasse* is this.

Under Government auspices an official known as the "Architectural Registrar" should be appointed, his duty being to prepare a register of every architect in the British Isles. The architect so registered is to be called a "registered architect." Further, should he have qualified by the examination of the R.I.B.A., or the Society of Architects, or any other recognised authority, he is to be called a "registered chartered architect," or, shorter, "chartered architect."

The Government official is to put every architect on his register—copies to be published—whether the architect asks or not. When this state is reached then a Bill can be introduced, not before. I consider this is the only method to force us to unity.

At present a valuer must pay his Government fee and be registered; why not architects?

Leeds. A. WINCH.

Taxation of Land Values.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—We have recently seen much correspondence in the daily and technical papers on the subject of the taxation of land values, and more particularly the clauses of the 1909 Budget relating thereto.

But most of these statements have reference to the theory and principles of these taxes.

It seems to me the important point to persons interested in building is to consider and make known the effects, for, however laudable or otherwise the intentions of the authors may be, it is not their intentions, but the effects, which are important.

I suggest that you would be doing good service to collect from sources unaffected by political opinion practical experience of the results of this legislation. That these will necessarily differ very considerably I feel sure, for I think it will be found that in different places the results are very dissimilar if not entirely opposite.

As a beginning I will give you my own experience in this district.

I should say, in the first place, that it is about forty miles out of London in a south-westerly direction, that building land has always been in good supply, that between 1900 and 1909 prices both of land and houses had considerably risen, that on account of the healthy surroundings there is a demand for houses between £70 and £150 per annum, and that they are mostly occupied by retired people.

Since 1909 there has been no great increase in the amount of land offered, nor has the price of any been considerably reduced. It is true one large estate was offered at less than one-third of what would have been considered its value before 1909, but as it was at once snapped up it is no indication of fallen prices. The amount of sales has considerably fallen off, and of course also the amount of building. The cause is not far to seek. A considerable amount of building was done before 1909 on borrowed money—money was easily borrowed on house property if lettable. That is now impossible. A feeling of uncertainty as to future taxation and imperfect understanding of the existing taxes also undoubtedly restrain people who otherwise would be willing to build.

Houses find ready tenants at pre-1909 prices, or in some cases rather higher, but it is undoubtedly more difficult to sell.

The valuations show most extraordinary results. Apparently the valuer is guided solely by a desire to please the owner. For all practical purposes these valuations are not worth the paper they are written on.

Two things we were promised by the advocates of

THE LIBRARY OF APOLLO PALATINUS, ROME. CONJECTURAL RESTORATION BY CANINA.

this taxation have not materialised: (1) A considerable boom in the building trade, (2) a reduction in rents; and I see no reason to expect that they will in the near future.

On the other hand, some of the prophecies of its opponents are not fulfilled. There has been no wholesale calling in of mortgages, and the building trade is not completely at a standstill.

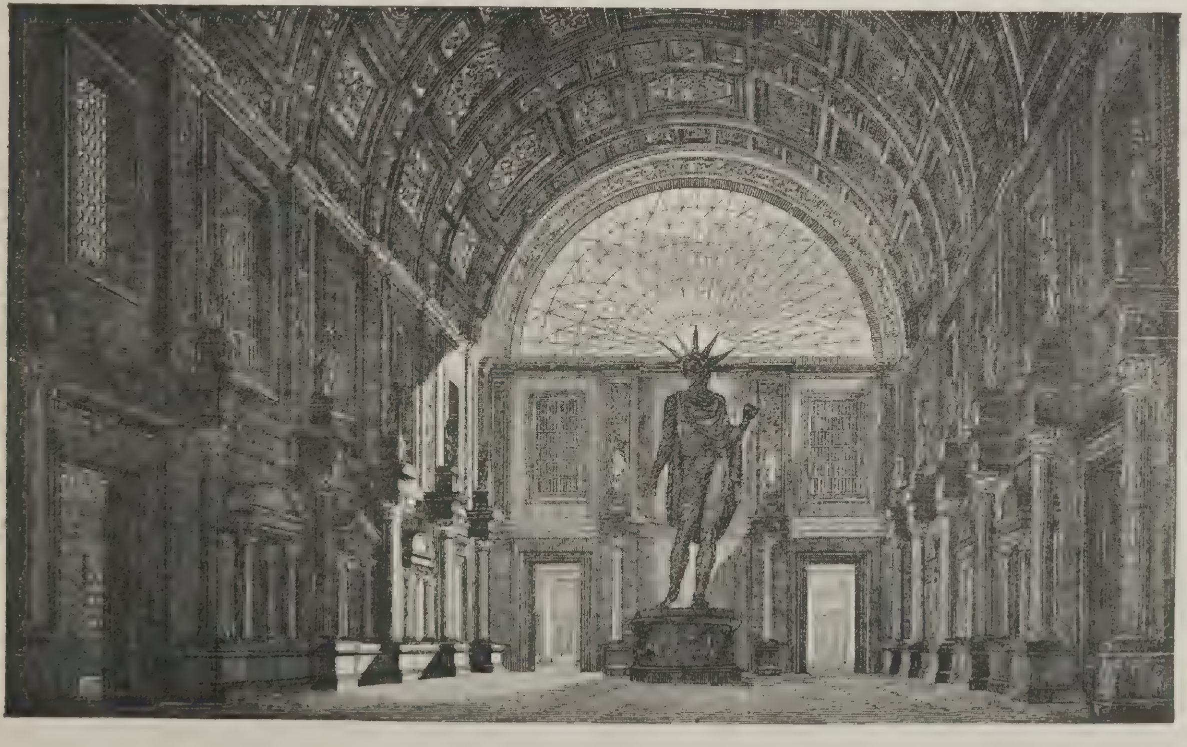
AN ONLOOKER.

THE RESTORATIONS OF CANINA.

THE career of Canina was described in an article which appeared in THE ARCHITECTS' AND BUILDERS' JOURNAL for November 20th, 1912. The two further illustrations which appear in this issue are conjectural restorations of the Palatine Library and the so-called Temple of the Sun. Both drawings show the genius of Canina for imaginative Classic composition, but their value from an archæological standpoint has been eclipsed by more thorough research made during recent years. The Temple of the Sun, some authorities conjecture, stood on the summit of the Quirinal Hill at Rome, surrounded by other buildings of religious type, with groups of statuary, shrines, and altars crowded together in one vast group of architectural splendour. Middleton states:—" In the sixteenth century, when the site occupied by the Thermæ of Constantine was being cleared to make way for the palaces of the Quirinal, Rospigliosi, and the Bentivoglio Palaces, an inscription recording the restoration of these thermæ by Retionus Perpenna, in the year 443, was found during the rebuilding of the Quirinal Palace. The enormous fragments of a white marble Corinthian entablature, which still are visible in these gardens, probably belonged to the main western entrance of the peribolos. One of these fragments is a piece of frieze, nearly 18 ft. long, enriched with cupids and birds among foliated scroll work. These fragments are thought by some archæologists to have belonged to the great Temple of the Sun, built by Ameliasus about 271 A.D., but it appears more probable that this temple stood in the Campus Martius, not far from the Pantheon." Canina's drawing shows a broad temple frontage of twelve Corinthian columns supporting a frieze richly sculptured over the angle columns, the suggestion of the chariot of the Sun and supporting figures in the tympanum of the pediment being appropriate aids to the character and peculiar purpose of the building.

Libraries of Apollo; Apollo Palatinus.

Middleton's description runs:—" The sides of the great peristyle were flanked by two large halls used as libraries, one for the Greek and the other for Latin books; a third side of the peristyle was occupied by another still larger hall, in which Augustus, when old and failing in health, used occasionally to convene the Senate. In this hall stood a very beautiful gilt bronze statue of Apollo, of Etruscan workmanship, 50 ft. high." Canina's restoration in this case is carried out with far greater accuracy than many of his archæological essays show. The insulated columns, supporting figures, are introduced as vertical decorative foils to the horizontal element in the design. The statue of Apollo, 50 ft. in height, gives a fair idea of the vastness of the place, and the geometrical basis of the window screen at the end should be studied. As pointed out in the former article, " Canina needs to be studied by the architect and designer for the suggestive motifs offered for modern adaptation." The whole school of modern architectural thought is far wiser than any one exponent, and we are witnessing to-day the beneficial results accruing to American architecture by reason of the extension of the principle of adapting tried and proved motifs; it should also be remembered that all the noted periods of architecture contain evidence of a similar system of transmutation. Mr. March Phillipps is shortly to read a paper at the Royal Institute of British Architects dealing with " Borrowing in Architecture." We have already gathered from his writings that he fails to appreciate scholarship in architectural design. Sir Joshua Reynolds, whose celebrated discourses spoke the thoughts of the eighteenth-century artists of England, proved conclusively that borrowing and paying interest is the essence of creative art.



THE SO-CALLED TEMPLE OF THE SUN ON THE QUIRINAL HILL, ROME.

CONJECTURAL RESTORATION BY CANINA.

THE PERIOD OF THE REGENCY.*

THE MERGING OF THE GRÆCO-ROMAN AND GREEK SCHOOLS.

BY A. E. RICHARDSON.

At first sight it does not seem a difficult matter to sketch the period of the merging of two great epochs, but the facts need careful adjustment. They fit together with the precision of a chronometer movement, and a clear reading of the age is only obtainable by a balance of varied data.

The period of the Regency forms a fitting crown to the eighteenth century, to the making of which every artist, writer, and philosopher had contributed, and which, even in its passing, lent lustre to the ensuing age of mechanics and commerce. We are told that, at Carlton House in February, 1811, both Houses of Parliament having received the official report on the condition of George III.'s health, the Regency was conferred with high ceremony upon the Prince of Wales. But we know with a greater certainty that Carlton House, as early as 1784, had "proved a focus of political faction," and that during the years which followed the Carlton House Court, in short, was kept up in steady hostility to that of George the Third.

England in the Early Nineteenth Century.

A picture of England from 1800 to 1820 must here be given. For this purpose we turn over the pages of the "Gentleman's Magazine," the "Edinburgh Review," the files of old newspapers, the writings of Wraxall or Twiss, or delve into the musty and almost forgotten biographical dictionary compiled by Gorton. For our incidents we can pick and choose as we feel disposed. We find England standing gloomily aloof while the battle of nations and giants is decided; rushing to the attack at propitious moments, adding to her territory in all parts of the world. The naval combat of Trafalgar secures the seas to her commerce; the six years' war in the Peninsula follows. The mighty figure of Napoleon stalks across Europe, to be hurled to destruction on the field of Waterloo. The Continent to Englishmen for years remains almost a closed book except for such short intervals as that afforded by the Treaty of Amiens. The Ministry of "All the Talents" is succeeded by that of "All the Hacks." The school of Sir Joshua Reynolds is continued in the works of West, Raeburn, Cosway, and Lawrence. The sculptors Banks, Nollekens, Flaxman, and Damer form a contemporary group. Through the beneficial system of pupilage many young architects begin their life's work under the influence of the eighteenth-century Classic tradition. For a closer inspection of the life of the age we read the drawings of Rowlandson and Gillray, or from among the prints at the British Museum conjure up the glories of the once fashionable print shops. If we need further evidence, the Crace collection or Ackermann's "Repository of Art" provides it. There is yet another view of the picture which calls for explanation, one which closely concerns us at the present time; it is the abnormal expansion of cities and towns which then took place. At the beginning of the last century the first-fruits of the industrial age were ripening, and this in spite of the general impoverishment occasioned by the prolonged Continental wars. Eighteenth-century London burst its bounds and absorbed the immediate villages; the mills and looms of Lancashire and the north country were working relentlessly, and converted miles of smiling country into a chain of industrial hives. Even Edinburgh adds to her Classic eighteenth-century gown, while Dublin stretches a string of villas along the bay to Dalkey. The inland spas of Bath, Clifton, Cheltenham, and Leamington attain to an unparalleled growth. Plymouth covers three towns and becomes the untitular capital of the West Country. The seaside watering places on the south and east coasts are converted from fishing villages to fashionable resorts. Under the direction of Telford and Macadam the trunk roads are improved, and coaching is elevated to a fine art, with the Regent as charioteer-in-chief driving from his Pavilion at Brighton to the stones at Westminster in four hours and a half. Meanwhile the clank of the steam engine is heard faintly from the north, sounding the death-knell of the coaches and the magnificent system of waterways. The age of iron and steel, of bridge-building, of gigantic harbour works, and architectural engineering heralds the nineteenth century.

The Development of Architecture.

Returning to a study of the architecture of the period and the influences which shaped its expression, we find that by 1820 the Greek theme is in the ascendant, although as regards the composition of masses the eighteenth-century theories still hold good. The romantic revival in literature which came into being at this time must be noticed. It was formed of two camps—one pledged to adoration of the Hellenic world, and the other devoted to the furtherance of mediæval legends. Keats and Shelley extolled the classic spirit, while Scott and Wordsworth played the timbrels of the knightly age. Both camps occupied parallel entrenchments, and both played a part in the resulting change in architectural taste. At this point we must again examine the activities of the Society of Dilettanti, whose leaders numbered Townley, Payne, Knight, and Englefield, and who were strengthened by Lord Northwick and Thomas Hope; the latter, a staunch friend of Percier, the French architect of "Empire fame," was dubbed by Sidney Smith "the man of chairs and tables." The cultured amateurs were still to the fore; Greece became more than ever the magnet of attraction; but, strange to say, after the Earl of Elgin's acquisition of the famous collection of marbles which bears his name, and after Byron's pronouncement of the "Curse of Minerva," collections of pictures formed the superior attraction. In place of the amateurs we find architectural archæologists in full investigation of the Classic fields, and the British, who in the eighteenth century had led the way, were ousted by the Germans. The mere fact that England maintained the long sea route to Greece during the Napoleonic wars, while France and Italy were closed to British travellers, affords sufficient evidence of the blind though temporary outburst for Greek temples which ensued. Greek antiquities were no longer imported to form private collections, but were acquired by the Government as occasion offered to enrich the public museums. Many young architects who subsequently acquired fame left England at this time to spend a term of years studying in the Hellenic Archipelago, and on their return were immediately commissioned to design public structures, and naturally their works reflected the design of the temples they had encountered. The Greek phase, however, was purely a transitory one, and led to better things. It must not be judged in any other than a tolerant spirit, because not only does it reflect the discipline of the age, but it proves the determination of English artists to emulate the greatest art the world has ever produced.

"Battle of the Styles" Begun.

At the outset of the nineteenth century we see the beginning of that great divergence of opinion which resulted in the "battle of the styles." The Classic tradition was split into two sections by the mediæval wedge. One half was shivered and lost; the other proved too strong to shatter, and has survived to the present day. To make the simile clearer, the Classic tradition, which up to 1830 had embraced both civil and domestic architecture, was henceforth developed almost solely for the design of public and official buildings, while the Gothic enthusiasts claimed the mastery in other directions. Indeed, the ambidexterity of many exponents who vacillated between the two branches contributed in no small measure to the temporary checking of Classic taste. But the so-called triumph of the opposing school was proclaimed too early. The deeply rooted Classic tradition withstood the shocks of storm and controversy of the later years of the nineteenth century. Although at times its interpretation left much to be desired, so strong is its spirit that, after passing the cycle of a hundred years, it is again in the ascendant.

We frequently hear it said that "architecture died a natural death at the close of the eighteenth century," that good taste came to an abrupt stop about the same time. The reason for such censure is the result of failure to read the more recent events of English history. It has been overlooked that even in an age teeming with literary products the architect still remained the true historian of his times.

John Nash.

The most prominent architect of the Regency was John Nash, a man of daring enterprise and great capacity for town-planning conceptions, but he was deficient in the elementary training of architecture. He was born at Cardigan in 1752, and became a pupil of Sir Robert Taylor, contemporarily with S. P. Cockerell. At first he does not appear to have entertained very strong ideas regarding the pursuit of architecture, and being in possession of independent means he retired to Carmarthen for some years. A visit of S. P. Cockerell appears to have fired his dormant ambitions, and he again entered upon practice in London. Between 1797 and 1814 Nash was responsible for several important works, and by command of the Prince Regent in 1814 he acted temporarily as Surveyor-General during the vacancy caused by the sudden death of James Wyatt.

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* The eighth of a series of Lectures on "The Work of the English Architects of the Eighteenth Century and the Neo-Classic School of the Nineteenth Century," given at University College, Gower Street.

Nash was a man of great artistic ability in dealing with the improvement of towns. He gathered up the various models of the earlier schools and transposed them to suit his own problems. No other architect in the history of the Classic development achieved such brilliant success in the handling of masses of buildings as Nash, who attained unity of effect in his street architecture by the juxtaposition of structures which were dissimilar in composition. And if the original façades of Regent Street are examined, it will be found that the resourcefulness of the architect in the latter regard is above question.

Sir John Rennie, in his autobiography, states: "Regent Street had been commenced under the direction of that clever architect Nash . . . From his novel mode of grouping shops into distinct masses of different styles (it had) excited considerable attention and was totally different from anything we had hitherto seen in the metropolis. This great and really magnificent street was, I am told, entirely his own idea; and, according to the opinion of the late Sir Robert Smirke, was a herculean task, on account of the great variety of interests to be dealt with, and he told me that nobody but the indefatigable Nash could have carried it through. He built a house there for himself, now the Gallery of Illustration, where George IV. honoured him with a visit. In fact, just about this time there was a perfect mania for architectural improvements."

Nash does not appear to have paid much attention to detail; the proportion and composing of buildings was his chief aim. Portland stone was out of the question on account of the cost. As it was, Regent Street cost approximately $1\frac{1}{2}$ millions sterling, but his design for Buckingham Palace shows his appreciation of the more permanent material. The Gothic school, obsessed with the desire for pinnacled silhouettes, was blind to the academic charm of Nash's distinctive work and yelped to a man in a chorus of disapproval; what they would have made of the street one dreads to think. A study of Nash's work offers to us all, lessons in the composition of primary masses which we cannot afford to overlook.

Nash's Principal Works.

1793: The County Gaol at Cardigan. Prepared the first plan for the lay-out of Regent's Park. 1797: The County Gaol at Hereford. Southgate Grove, Middlesex. The Casino, Dulwich (a new style of country house). 1799: Sundridge Park, Kent. 1800: A large house at Dawlish. 1812-20: Projected the Regent's Canal, the details of which were carried out by his pupil Morgan. 1812: Highgate Archway. Regent's Park laid out and the buildings started. 1813-16: Regent Street. 1814: The decorations and other arrangements in the parks to commemorate the general peace. A reception-room of novel design at Carlton House, afterwards removed to Woolwich. Refronted No. 29, Dover Street—his own house. 1816-18: The Opera House in the Haymarket with George Repton (the arcade still remains at the side). 1817-27: The Pavilion at Brighton, of exotic design, for the Prince Regent. 1819: The front of the County Fire Office (the interior by R. Abraham), and, about this date, the Quadrant. 1818: The Ophthalmic Institution in Albany Street (used now as a garage). 1820: The Haymarket Theatre, with its fine portico. 1823: The Gallery of the Society of Artists in Suffolk Street; also many works of importance in Wales, Ireland, and Scotland. Six different designs to commemorate the battle of Waterloo. The residences for himself and Mr. Edwardes in Lower Regent Street. 1826-8: United Service Club House, Waterloo Place. 1825-7: Buckingham Palace for King George IV. on the site of Buckingham House. (It appears that the grant obtained by the King from Parliament was only for repairing it.) The arch in front of the Palace (the marble arch of Carrara marble cost £30,000; removed in 1850-1 to Cumberland Gate). 1828: East wing of Carlton House Terrace (west wing by his nephew, Pennethorne, who assisted him).

The Committee of Taste.

Nash formed one of the Committee of Taste appointed to design such improvements as were imperatively required in the neighbourhood of Charing Cross, the Strand, Holborn, and Oxford Street; Lord Farnborough, John Wilson Croker, Sir John Soane, Sir Robert Smirke, and others were of the company. The labours of these gentlemen resulted in the lay-out of Trafalgar Square, the entrance to the West Strand, Cockspur Street, and the connection of Oxford Street to Holborn. Sir Frederick French, a fashionable amateur, prepared his scheme for constructing a series of magnificent quays along the banks of the Thames between Whitehall and old Blackfriars Bridge, and even published a book of engravings showing the effect. Sir John Rennie and Philip Wyatt materially aided Sir Frederick French in the idea. But for nearly half a century nothing was done; Bazalgette carried out the present Embankment on nearly identical lines. The Metropolitan improvements were echoed throughout the kingdom, and more than one provincial architect was spurred to emulation by the great schemes then progressing in London.

The other architects of the period who engaged in the Græco-Roman style and blended it with the Greek were David Laing, who built the Customs House, and John Linnell Bond; the Rennies, father and Son, and William Tierney Clark, were architect-engineers who were really capable of extending their engineering knowledge to problems of architecture.

The Greek School.

There exists no positive line of demarcation between the architecture of the Greek phase and that evolved by the coteries of the preceding school; the division, if it exists, is so slight as to defy analysis, and must perforce be regarded as wholly arbitrary. The beginnings of the purely Greek phase practically coincide with the stage when the Græco-Roman reached its highest development. It resulted from a desire on the part of a few pedants literally to transplant the temple porticos of Greece without attempting to adapt their form to modern problems. Many egregious mistakes followed, mainly arising from the endless repetition of the Greek Doric order attached to square boxes without appreciation of either form or utility. This, at first sight, seems a scathing indictment to prefer against the style; but it should be remembered that the Greek phase in its earlier moods was purely experimental and transitional to the more enduring Neo-Grec and Italian reaction. The mistakes of the Greek phase have nothing in common with the successes, and it is to the latter that attention must be directed.

The chief exponents of Anglo-Greek architecture comprised William Wilkins, Gandy-Deering, Sir Robert Smirke, Decimus Burton, Archibald Elliot, Thomas Hamilton, David Hamilton, John Papworth, George Smith, the Inwoods, Henry Goodridge, Charles Fowler, William Henry Playfair, and numerous other architects practising in all parts of the kingdom. The duration of the style, as a distinct manner, lasted but twenty years, after that it loses its identity in the fuller renderings of such masters of style as Sir Charles Barry, Professor Cockerell, and Harvey Lonsdale Elmes, but the sequence of the Neo-Classic tradition was continued unchecked.

For the purpose of a broad view of the Greek school five architects alone need consideration, namely, William Wilkins, Sir Robert Smirke, Decimus Burton, Thomas Hamilton, and William Henry Playfair.

Wilkins.

William Wilkins, 1778-1839, worked conjointly with Gandy-Deering. He must be regarded as the Greek scholar who rose to prominence before Cockerell achieved fame. The more important works of Wilkins are as follows:—1806: Haileybury College. 1808: Doric Portico, Kingston Rooms, Bath. Nelson Pillar, Sackville Street, Dublin. 1809: Grange Park, Hampshire. Greek Doric. 1817: Nelson Pillar, Yarmouth. 1821: The New Church at Nottingham. 1822-3: The Shire Hall at Norwich. 1823: The Theatre at Norwich. 1806-11: Downing College, Cambridge. 1822-6: The United University Club, Pall Mall (since rebuilt). 1827-8: London University College, Gower Street, with Gandy-Deering. The side wings are by Professor Lewis.

Smirke.

Sir Robert Smirke, 1781-1867, for the first quarter of the last century, shared the major portion of professional practice in London with Soane and Nash. His works comprise some of the most important public structures in the country. The General Post Office, 1824-29. The Union Club, Trafalgar Square, 1824-27. Belgrave Chapel, Belgrave Square. Council House, Bristol. British Museum, famed for its magnificent plan. Remodelled the Customs House, after the failure of the foundations. Entrance to the West Strand. Completed Somerset House right façade and built King's College. Old Covent Garden Theatre, 1809. The Equitable Assurance Company's Offices, Bridge Street, Blackfriars. Wellington Monument, Dublin. Hoare's Bank, Fleet Street.

Decimus Burton.

The professional career of Decimus Burton, a pupil of George Maddox, extends from 1820 to 1870. He was born in 1800 and died in 1880. The Colosseum in Regent's Park was practically his first work, although it is conjectured that he assisted his father in the lay-out of the northern portion of Bloomsbury. Then followed various architectural features for the Government at Hyde Park, etc. The Athenæum Club, which was opened in 1830, is his finest work.

Burton carried out some of the terraces in Regent's Park, and was responsible for the design of the terraces on the sea front at Brighton and Hastings, as well as for many buildings at Tunbridge Wells.

Hamilton.

Thomas Hamilton, 1784-1858, achieved the great triumph of the Greek School in his composition of the buildings forming the High School at Edinburgh. Hamilton also designed another important work

—the hall of the Royal College of Physicians in Queen Street, Edinburgh.

Playfair.

William Henry Playfair, another Scottish architect, worked in conjunction with Professor Cockerell for the design of the national monument on the Calton Hill, Edinburgh. No other architect attained to such reputation in the public eye in Scotland during the nineteenth century. Playfair, we learn, became a pupil of William Stark, and subsequently studied architecture in London under Wyatt and Smirke. In 1816 he won the competition for additions at Edinburgh University. Among his chief works are the Observatory on the Calton Hill and the Advocates' Library.

From 1820 onwards his work echoed the Metropolitan improvements then taking place in London. He designed the series of terraces, crescents, and streets on the slopes of Calton Hill and north-east of it, the most noteworthy being the Regent, Royal, and Carlton Terraces, and, on the north side of Edinburgh, the Royal Circus. In 1822 he designed the Royal Institution on the Mound, and in 1850 the National Gallery. Mainly on account of Playfair's labours Edinburgh has received the title of "the Modern Athens."

ARCHITECTURE IN AUSTRALIA.

In the presidential address recently delivered before the Institute of Architects of New South Wales, in Melbourne, Mr. G. Sydney Jones discussed the question of "modernising," and pleaded for a school of architecture for students.

"What has been termed 'modernism' in architectural design—the spirit of freedom—is the force at the back of all growth and progress, but in a young and vigorous nation as ours the tendency is to be carried too far in this direction, unless some check is put upon the movement. Scholasticism or tradition—for us the tradition of the English from whom we have sprung—is the element of law and order which is necessary to curb ignorant and vulgar individuality in design.

Excessive Individuality.

"It has been well said that 'excessive individualism means energy without order; excessive socialism, order without energy.' It is because I foresee that there will soon be chaos in the field of architectural design as a result of excessive individuality, unless it is curbed, that I impress upon you the necessity of urging the public and the Government to establish a school of architecture, and it will be one of the tasks of the professors of such a school to teach the true relationship of the complementary forces of individuality and tradition. Our students, being thus trained to design on lines which combine the best traditions in our art with the freedom of thought characteristic of a free country which has before it a great future for the art of architecture, may safely be left to create works of which the people will be justly proud, as being distinctly and in the best sense Australian. That is what is wanted.

"If, by the establishment of a school, that combination of tradition and individuality can be secured in design, then we need have no fear for the future quality of the architecture of our country. But if we cannot get such a school at once, we know that the future will have in store for the next generation only poor mediocrity.

COURAGE IN COLOUR.*

BY R. GOULBURN LOVELL, A.R.I.B.A.

In these northern climes there is a shrinking from the dignity of pure colours, a fear that they may be termed gaudy; there is a general lack of courage in applying any colour to one's surroundings excepting tertiary tones and greys. Already, however, there are indications that the "colour sense" is awakening, and that the feeling for pure colour is growing. The movement is one which is likely to be accelerated year by year.

A knowledge of the theory of colour will place a much-needed tool in the hands of the architect, the designer, and the decorator.

The theory of colour-production depends upon the combination of the primary colours in different proportions, and it must be noted that true value of the colours depends upon the juxtaposition of one to the other. Colours are so altered by the manner in which they are seen together, that it becomes essential for all users and sellers of coloured goods to acquire some knowledge of the theory of colour-production and colour-selection.

In tropical and sunny latitudes less courage is required in using bright colours, because the brilliancy of the sun subdues them, and the people in these countries have rightly appraised the value of this property of light. Northerners, however, require stimulating colours more than those who live in warm sunshine, and fortunately bright colours have a greater force in dull climates.

We have been so accustomed to the dowdiness of drabs and the gloominess of greys that it is even assumed that people of taste should admire dull colours, and that only vulgar persons like bright ones. The love of colour, however, is now awakening, and we can expect with certainty a greater luxury of pure colour inside our houses. In time more of it may peep out of doors, and then show itself quite bravely to cheer the greyness of our towns.

In considering the application of brighter colours in our homes and surroundings, the two main attributes of beautiful colouring should be insisted upon: Gradation and Contrast.

The first essential of beautiful colouring is *gradation.* No entirely beautiful colour exists without the quality of gradation. Certainly the most subtle beauty in colour is that of gradation, either of tone or of shade. Gradation is to be seen everywhere—in sky, on earth, and water.

Plain coloured surfaces, under most conditions, emphasise gradation. The play of light on a surface produces a far finer and more luminous gradation than any made by pigments. The effect is almost as fine on the plain coloured walls of a room as on the folds of a curtain or on those of a robe. The difference between the deepest shade and the lightest tint is truly amazing. These gradations are a constant delight to those who look for them.

While nearly all gradations are beautiful, all contrasts are not. It is the bad contrasts that usually constitute bad colouring. The everyday application of beautiful colouring requires that the theory of contrasts should be appreciated and understood. Contrasts are known either as simultaneous or successive contrasts. There are contrasts of shades, contrasts of tones, and contrasts of shades and tones. These are the qualities of contrasts. Contrasts are bad either in quality or quantity.

An interesting experiment illustrating the development of the chromatic scale can be made with an ordinary prism of common glass. Hold this to the light and turn until the spectrum is seen red on top and violet below; turn until these colours join in forming a band of bright red, green, and violet. Slightly turn the prism again, and the band broadens to reds, oranges, yellows, greens, blues, and violets. These and the innumerable gradations existing between all of them are the spectrum colours which we strive to imitate with pigments. All pigment colours are dirty compared with the spectrum colours. The nearest approach to them is to be found in fine stained glass held to a bright light.

To revert to the consideration of contrasts, colours may be chosen so that they are mutually helpful and appear precious and beautiful, or they may be mutually harmful and appear either glaring and gaudy or dull and dirty.

By means of charts the author showed that the complementary colours appear the most complete and lustrous, the reds, for example, becoming more red, and the greens more green; whereas harmful juxtaposition made identical colours dull.

It will be further observed that colours other than the complementaries, when they are brought into contrast, appear to be moved farther apart. For instance, with red and yellow in juxtaposition the red is moved nearer to purple, and yellow nearer to green. [This the author proved by a further experiment.] In this case the contrast is somewhat harmful, and produces a gaudy effect, particularly if used in nearly equal masses.

Bad contrasting pairs of colours are those closely related, or those standing near each other on the chromatic circle without any gradation between them. For instance, red and orange, blue and violet, green and blue are all bad contrasting pairs of colours, particularly in the lighter shades.

A good method of obtaining an uncommon and effective contrast is by pairing related colours not less than 90 degrees apart. For instance, red with yellow-orange or orange with violet-red will make a courageous combination that could be well employed to produce a striking effect. The same may be said with all the other colours similarly placed: blue and violet-red, or violet and green-blue and green and violet-blue, or blue and green-yellow. The names employed are used arbitrarily to cover a group of colours, tones, and shades which owe their origin to these primary and secondary colours. A very small proportion of actual pure colour is seen in nature; it is usually surrounded with its own tones and shades, and they in turn are supported by the greys and broken colours of the same or other groups of colours.

Contrasts of shades are very frequently ignored, and this neglect must be held responsible for most of the bad colour contrasts and combinations. Different shades on the same scale make good contrasts, and in any pair of complementary colours the different shades in each, used indiscriminately, will contrast well. These observations apply not only to the pure colours in the chromatic circle, but also to the broken colours and the tertiary colours and greys.

The bad contrasts are usually those in which the contrasts are mixed; that is, a contrast in tones and a contrast in shades are found in the same combination. For instance, in any pair of good contrasting colours the corresponding shades of each will contrast well, while different shades will have a poor effect. Some æsthetic skill is required before making good mixed contrasts in tones and shades.

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* Extracts from a paper read before the Society of Architects, December 11, 1913.

In most colour schemes it is desirable to have a dominant tone, which should be supported with a small proportion of a good contrasting colour, or with a small proportion of a purer colour of the same group. The nearer this supporting colour is to a primary, or the nearer it is to a pure colour, the less there is required of it. What is given up in mass is gained in brilliancy.

It will be seen that a very small proportion of the primary blue is required as a contrast to the orange-citrons, and a somewhat large proportion of the yellow-orange secondary is required. Or take the olive green as the dominant hue, and the same observations apply: more of the yellow-orange secondary as a contrast, or less of the blue primary, which belongs to the same group as the olive green.

The influence which colour has upon life generally has been but little understood. It has been conclusively proved that whereas blue has a most stimulating and health-giving power, green produces entirely the reverse. This may be proved by taking a series of cloches, or the glass bells used in French gardening. These should be of all colours, and if placed over any living object, such as plants, insects, etc., it will be found that those under the blue cloche will increase in size, vigour, and vitality, and those under the green cloche will wither away rapidly.

This aspect of the question should be borne in mind in decorating hospitals and sanatoria. Whereas a patient will have a hopeful stimulating outlook on life if lying within blue surroundings, an entirely opposite effect will be obtained where greens and reds predominate.

METHODS OF SECURING TERRA-COTTA TO STEELWORK.

Terra-cotta is being used to-day in such large quantities in buildings of all kinds, from the private house to the skyscraper (which latter is commonly sheathed with this material), that a short article descriptive of the methods of fixing it in position will doubtless be of interest. First of all, there are practical limits to the sizes of the pieces used, whilst the shape also must be considered. A good working limit of size is about 2 ft. 6 in. by 2 ft. by 1 ft., but smaller pieces are preferable, as the material shrinks about one-half inch to the foot in burning, also large pieces would show the warping and twisting more than small pieces. It is good practice to keep all the pieces as regular in shape as possible—that is to say, to have no awkward projections sticking out. This will give better results in manufacture and there will be fewer breakages in transit and handling on the job. To minimise the possibility of accident this should be done, as the re-making of these pieces in case of mishap may lead to costly delay. The manufacturer usually makes duplicate pieces, particularly of rich or delicate parts, to ensure satisfaction to his customers. Architectural terra-cotta weighs on the average 70 lb. per cubic foot. The average thickness of the material in the web is $1\frac{1}{4}$ in. and the crushing weight about 7,000 lb. per square inch.

From the above information it will be seen that it is unnecessary to fill terra-cotta blocks to add to their strength. This is done to form a bed for the work that is above, or to keep the water from attacking any steel that may be supporting the blocks. It is easier to fix terra-cotta in the building than it is to manufacture it, therefore the design of the individual parts is of the first importance, the parts being designed as simply as possible and in relation to the steelwork by which they are carried. The fixing of terra-cotta in a large job is done by the structural engineer, who accommodates his steel beams to the jointing of the terra-cotta, putting in all necessary angles, brackets, hooks, and clips.

Column Construction.

Manufacturers assert that a column shaft can be made 8 ft. long in one piece with a diameter of 15 in. Larger columns can be made up of drums not exceeding 2 ft. in diameter and about 18 in. high, fluted, as shown in sketch 1a. Column drums 3 ft. in diameter can be made if the horizontal joint is concealed by the interposition of a rusticated drum with a plain drum, but the only feasible method of jointing Classical column shafts over 2 ft. in diameter is as shown in sketch 1b. Here it will be seen that the column has vertical joints. To the left of the centre line—these are shown in the flutes and to the right of the fillets—either method can be used. This method of jointing allows the fixers to "true up" the columns more accurately than could be done with large pieces, owing to shrinkage in the material. The right and wrong way of jointing small attached columns is shown in the second sketch. These drums are made 18 in. high. It will be seen at once that a piece of terra-cotta as at A would crack in burning. Where the column meets the wall face, the right method is to put a joint as at B. Sketch 3 shows the base of a pilaster resting on the sidewalk. The settlement of the building, which is bound to take place, will flash off the outer edge of the base; therefore the pilaster and the sidewalk should rest independently on the finished wall. The best method of making a window sill is shown in Sketch 4. It drops away immediately from the wooden sill about 1 in., thus allowing the roll to cover the joint of the sill.

Sketch 5 shows a flat window head with joggle joints and the resultant cracks in the material owing to the acute angle formed in the blocks. The correct method

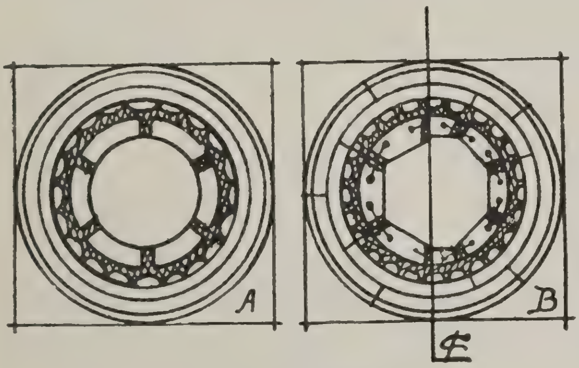


Fig. 1 (A and B).

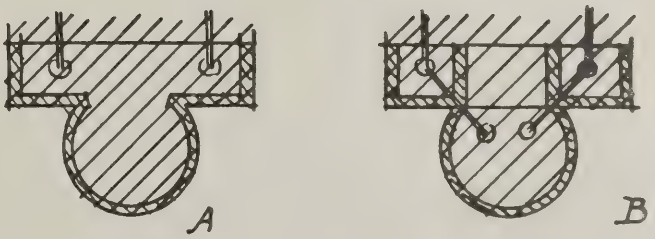


Fig. 2 (A and B).

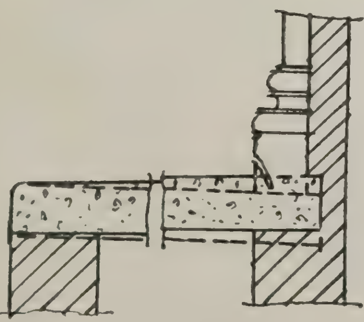


Fig. 3.

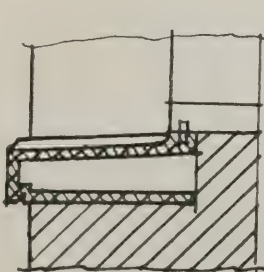


Fig. 4.

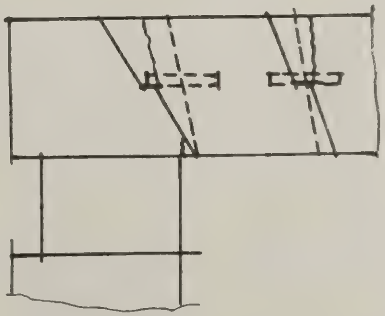


Fig. 5.

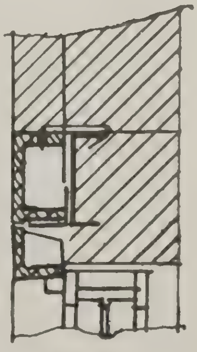


Fig. 6.

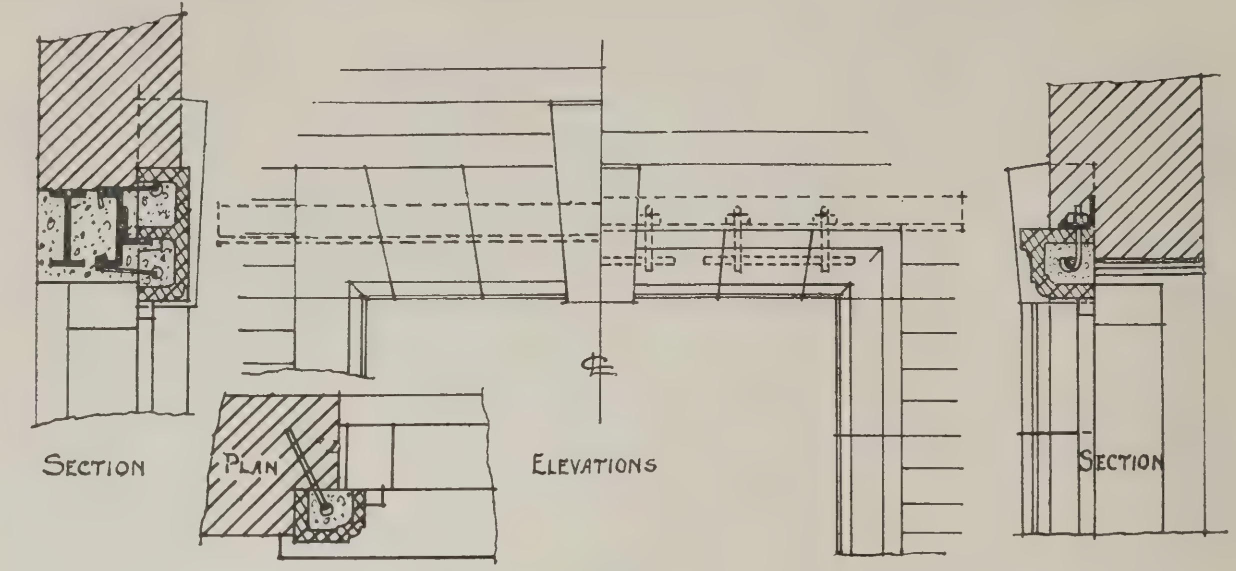


Fig. 7.

of jointing and dowelling is shown by dotted lines.

In Sketch 6 is shown a broken window head. This is caused by the shelf angle supporting the terra-cotta having too much projection. The correct method, illustrated in Sketch 7, allows the terra-cotta only a 2-in. bearing on the shelf angle. To the left of the centre line is another method of hanging a window head. Here the hook bolts and nuts allow a very fine adjustment of the blocks. Although in this case the strength of the construction is unnecessary, it is shown as an example of good work. A simple terra-cotta head is frequently fixed by putting a 1½-in. pipe through the blocks. If the holes in the blocks are not in alignment they can be made so by means of a star drill. The usual clip and hanger employed in suspended terra-cotta is indicated in Sketch 8.

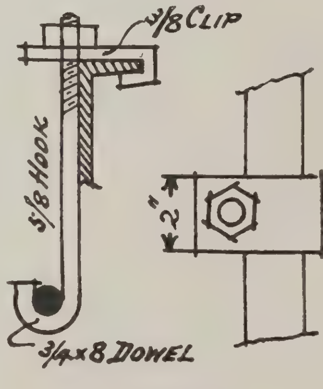


Fig. 8.

Sketch 9 shows plan, elevations, and section of a projecting door head. The system of carrying terra-cotta is capable of adjustment to suit the door head of much greater projection. The steel look-outs are so arranged as to come between the joints of the terra-cotta, and are tailed down to the wall beams by hook bolts. The advantage of the hook bolt here is that it may be fixed anywhere along the wall beam without drilling. The soffit panels will be lipped on to the look-outs, the bed mould hooked up to an angle across the look-outs. The members of the cornice will be hooked back to the steel as shown, and the blocks will be filled with concrete wherever possible in order to protect the steel from moisture.

Sketch 10 gives the details of construction of a cornice projecting about 2 ft. 9 in. Here steel brackets are provided to carry an I-beam or channel along the front of the cornice. To this the cymatium and corona of the cornice are fixed. The modillions and panels between the piers are hooked up to angles spanning from the front beams to the wall beams. In cases where a lot of filling in the cornice is not permissible, tees are used instead of angles to support a 2-in. tile floor, on which the

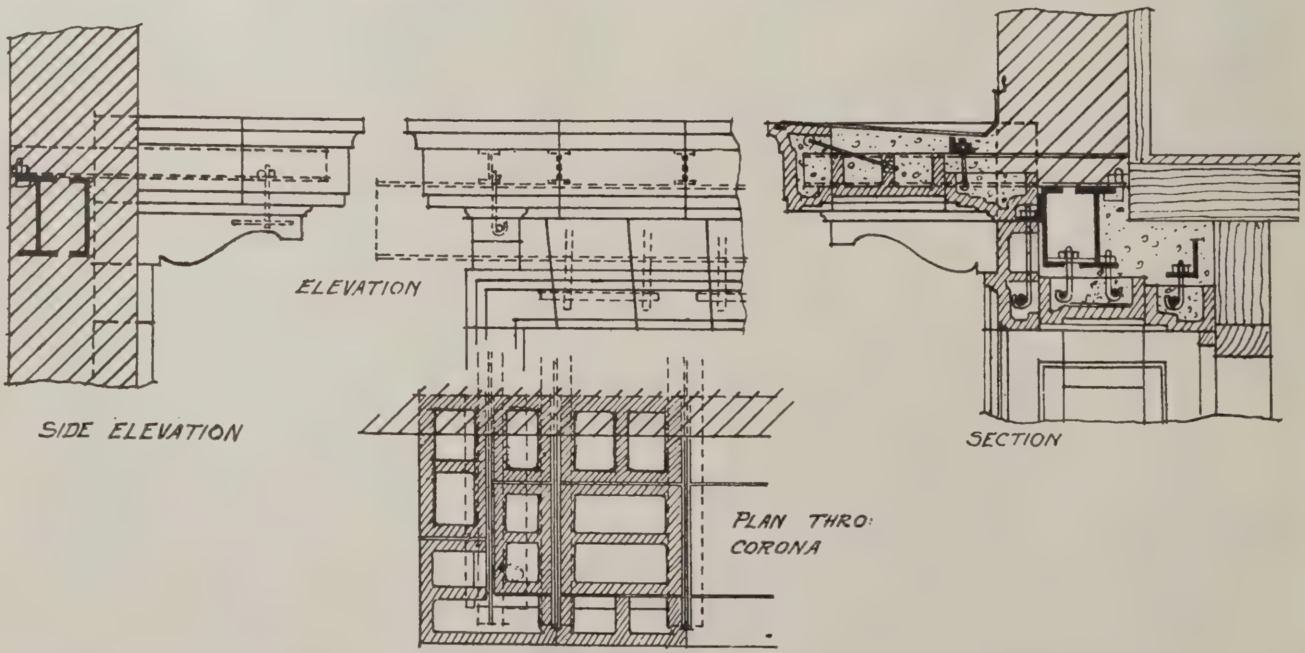


Fig. 9.

concrete gutter is laid, this being lined with copper and let into a wraggle joint as shown. The proper method of fixing balusters and coping is shown in Sketch 11. Each baluster is bolted through the channel, which latter is carried across the baluster. A small filler of terra-cotta is placed between each baluster to protect the steel from the weather. The coping is then laid with a bed of stiff mortar over each baluster. The whole can be secured in line by secret clamps let into a groove provided at the joints of the coping and afterwards covered with cement.

Sketch 12 shows a chimney cornice, dropped down to allow the roll to cover the joint, the coping being carried over the flue lining in order to prevent the water from getting between it and the brickwork. A groove is made in the terra-cotta and a secret clamp is let in with cement at each joint. It is very necessary to protect from water all steelwork in connection with terra-cotta. To this end it is advisable, particularly in suspended work, to fill all the blocks with a weak mixture of fine concrete after the blocks have been fixed in position. The accumulation and subsequent freezing of the water would shatter the blocks, and the cost of replacing one piece would probably equal that of the entire concrete filling. There are places, however, where concrete could not be used; therefore, other precautions equally effective must be taken.

In cornices of great projection the usual method is to lay a tile and concrete floor on top of the steelwork. This is done with small tees and 2-in. book tiles. The concrete is then laid above this to the necessary fall and covered with copper.

ARCHITECTS' AND SURVEYORS' APPROVED SOCIETY.

The first annual general meeting of the above Society was held in the rooms of the Architectural Association, at 18, Tufton Street, Westminster, on December 18th. Mr. W. E. Woolley, President of the Surveyors' Institution, took the chair. Mr. Curtis Green, President of the Architectural Association, wrote regretting his inability to be present and assuring the Society of the cordial support of the Association.

Mr. F. R. Yerbury, Secretary, read a statement, from which the following extracts are taken:

"The membership has steadily increased. We have since the last meeting enrolled 404 members. We have lost ninety-nine members, one, I regret to say, by death, the majority of the remainder resigning on account of their incomes rising beyond the Insurance limit. A few members have gone abroad, and three have transferred to other professional societies owing to a change in their professions. We now have 1,879 members on our registers. The sickness and maternity claims have been far below the number estimated by the Government actuaries. Up to the present we have met twenty-five maternity claims and 115 members have received sickness benefit. Two members have received sanatorium benefit.

"I am glad to say that most of the claims dealt with were for illnesses which may be regarded as not being serious, and at the present time there are only six members on the sick list, one lady and five gentlemen.

"The committee of the Society has endeavoured to be of as much assistance as possible to those of its members needing its help, and it has been able in many cases to render services not by any means required by the actual letter of the National Insurance Act. Wherever possible members in hospital have been visited, and they have been invited, as indeed all members of the Society are invited, to regard the committee as a body prepared and anxious to assist them in any way which may be in their power.

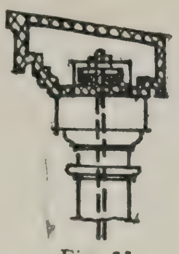


Fig. 11.

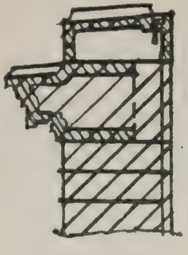


Fig. 12

"A Benevolent Fund has been formed for the benefit of members requiring it. Happily very few cases of distress have as yet come before the committee, but it is felt that the existence of such a fund will be a great asset to the Society, and will enable the committee to give financial assistance, when necessary, beyond the monetary benefits to which members are entitled under the Act.

"A scheme for dealing with this fund in other ways is at present under consideration."

Mr. Maurice E. Webb, referring to the financial position of the Society, called attention to the fact that although the Government actuaries had reckoned that the probable amount of benefit payable per week per member would be 3d., in this Society the actual payments made worked out at something under 1d. He also pointed out that although it might be a matter for criticism that the amount spent on administration was in excess of the amount paid out in benefits, it should be remembered that the administration expenditure covered the whole year, whereas the sick benefits had only been payable for six months. Mr. Webb concluded his remarks by proposing a vote of thanks to the retiring President, Mr. Reginald Blomfield, F.R.I.B.A. This motion was carried.

The President moved the re-election of the committee and congratulated the Society upon its satisfactory position. He stated that he, personally, would be glad to do all he could for the Society.

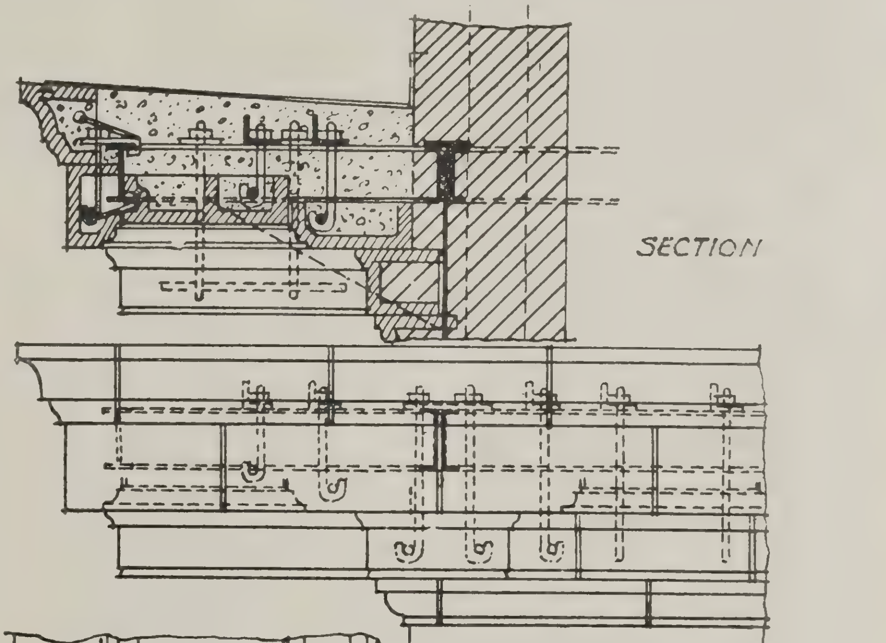


Fig. 10.

The motion was seconded and carried.

Mr. George Corderoy, chairman of the committee, responding to the motion electing the committee, said that when the Society was first formed he predicted that the funds available for benefits would be higher than in many other societies, on account of the general good health of the members. The actual expenditure per head for administration had worked out at 2s. 7½d., whereas the amount actually allowed by the Government was 3s. 5d. Members of the committee had given their services free, although under the rules they were entitled to certain fees for expenses. The Architectural Association had assisted them by giving the use of offices free. He very much appreciated the work of the secretary, particularly in connection with visits of enquiry and encouragement which he paid to members who were sick or in difficulty, and the personal touch which was kept with members of the Society.

Certain amendments of the rules were passed, and on the proposition of Mr. Ralph Ellis a vote of thanks was passed to the Architectural Association for its assistance.

Mr. T. J. Carless, President of the Quantity Surveyors' Association, proposed a vote of thanks to the chairman, which was seconded by Mr. George Hubbard and carried unanimously.

The committee is very anxious to increase the annual income of the Benevolent Fund and it invites subscriptions from architects and surveyors. Already a number of gentlemen are supporting the fund by subscribing amounts from half a guinea upwards per annum.

The value of the work of this Society can be considerably increased by the existence of a strong Benevolent Fund, which will enable the committee to give financial assistance in cases where it is necessary beyond the allowances of the National Insurance Act.

ENQUIRIES ANSWERED.

Government Appointments.

D. W. C. writes to ask what Government appointments are open to quantity surveyors.

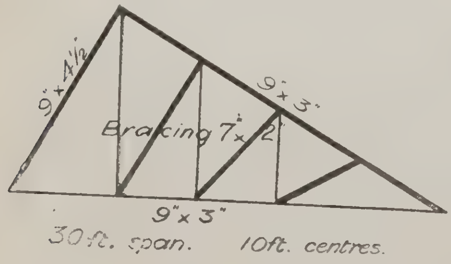
—This question, which we have frequently answered in the past, should be addressed to the Civil Service Commissioners, Burlington Gardens, London, W.

Roof Truss from Floor Boards.

ADVENT writes: "Kindly give a figured sketch of a light form of roof truss (spaced 10 ft. centres), having a span of 30 ft. and built up entirely of floor boards bolted together. The trusses should have one side glazed at 60 deg., the other side slated at 30 deg.

—If floor boards bolted together made an economical roof truss they would be more often used; but, except for special cases and small spans, there is no advantage whatever. The approximate scantlings required for the proposed roof are given on the accompanying illustration; as the correspondent is an architect he will be able to determine the joints and bolts.

HENRY ADAMS.



Requirements of Repairing Lease.

CAREFUL writes: "A house is let on a repairing lease (for seven years) which expires in June. The covenant says: 'Keep in good and substantial repair to satisfaction of lessor, and will paint with two coats,' etc. The owner is served with a nuisance notice to abate in fourteen days 'defective drains under house.' Does not this covenant throw the cost on to the tenant?"

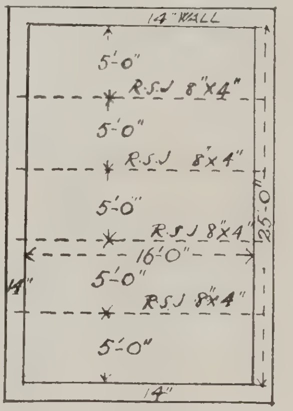
—The word "substantial" in the covenant is most material to the issue, and it makes the lessee's liability a very onerous one and such as he should not have accepted in a lease for so short a period as seven years.

I am of opinion that the liability for the abatement of the nuisance falls upon the lessee, but whether it is a fair thing for him to pay for under the circumstances is quite another matter.

F. S. I.

Steel and Concrete Floor.

SUBSCRIBER writes: "The accompanying plan shows a proposed Portland cement concrete floor 8 in. thick, filled in between 8 in. by 4 in. rolled steel joists. Is it necessary to put small joists in between, or will the floor carry without? The room is intended for a boys' lavatory in an elementary school."



PLAN OF LAVATORY FLOOR

—The external load to be provided for is, say, ⅔ cwt. per foot super. and the floor itself, if of plain concrete, will weigh, say, ½ cwt. per foot super. With rolled joists 16 ft. span and 5 ft. centres the load on each will be $\frac{16 \times 5 \times (\frac{2}{3} + \frac{1}{2})}{20} = 4\frac{2}{3}$ tons. An 8 in. by 4 in. by 18 lb. rolled steel joist will carry safely 4.4 tons on a span of 16 ft., but the deflection will be rather great. The floor may be lightened by making the concrete 3 in. thick with No. 9 diamond-mesh expanded steel embedded in it and resting on 1½ in. angle bars riveted to the rolled joists.

HENRY ADAMS.

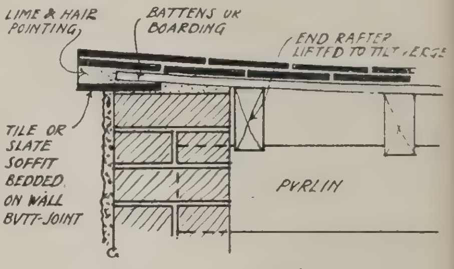
Theatre Design.

THEATRES writes: "Can you inform me of a book on theatre or music-hall design giving practical details of the construction?"

—"Modern Opera Houses and Theatres," by Edwin O. Sachs (3 vols., £15 15s. net) is a comprehensive work. We ourselves hope to publish an article on the subject shortly.

Finishing Verges.

SUBSCRIBER writes: "Kindly show the usual English method of finishing the projection (tiles or slates) at the gable end of a building."


LIME & HAIR POINTING
BATTENS OR BOARDING
END RAFTER LIFTED TO TILT VERGE
TILE OR SLATE SOFFIT BEDDED ON WALL BUTT-JOINT
PURLIN
G.

DETAIL OF VERGE

—The method is shown in the accompanying sketch.

G.

Wire Lashings.

CORRESPONDENT writes: "Can you refer me to the makers of a special wire-rope tie?"

—Steel scaffold wire-lashings with sweated end loops (dispensing with loose thimbles) are supplied by Palmer's Travelling Cradle and Scaffold Co., Belvedere Road, London, S.E. The Patent Rapid Scaffold Tie Co., Ltd., 124, Victoria Street, Westminster, should also be consulted.

G.

Books on School Buildings.

J. O. T. writes: "Please recommend books on the design and planning of school buildings."

—Suitable books are Clay's "Modern School Buildings," £1 5s. net., and Robson's "School Planning," a practical treatise on the planning of colleges and schools, 15s. net. But the subject has become so greatly modernised that it is best studied in the light of recent articles in this Journal.

Measuring up Church for Extras.

CLERK writes: "Please give a few hints on measuring up a small suburban church. The work is to be done with a view to arriving at the extras over contract quantities."

—If the "extras" referred to are involved by a recasting of the whole design, it will be better to measure up the whole building, abstract and bill the dimensions, price at contract rates (where applicable), and agree prices for items without parallel in the contract, but if the variations involve merely alterations in one or two particulars, or work which is clearly additional, the measurements may deal with those items only. The dimensions should be taken off in a book ruled for the purpose, known as a "surveyor's measuring book," each page being ruled in column form with three narrow columns to the left, respectively for number of times (as a multiplier to each item), dimensions, and worked-out super. or cube results, and a wide column to the right for description of work. Dimensions of work of similar character are entered in the description column, collected, cast up, and their *sum* placed in the dimension column. This collection saves the trouble of making numerous entries of the same kind. Care in stating the situation of each item booked is amply worth while to avoid future doubt. In taking off it is best to work on a definite system—such as starting at the left hand corner and working round with the sun. Take length first, then breadth or width, lastly depth or height.

G.

SPECIAL LEGAL REPORTS.

Builders' Dispute About a Wall: Question of Footings.

Belfitt v. Crust.

December 16. Chancery Division. Before Mr. Justice Warrington.

This was an action by Mr. Jas. Belfitt, of Spalding, against Mr. C. Crust, a solicitor, of Spalding, and had reference to a narrow strip of land on which a wall stood.

Mr. N. Terrell, K.C., and Mr. P. Wheeler appeared for the plaintiff, and Mr. Clauson, K.C., and Mr. A. Cross for defendant.

Mr. Terrell said the question at issue was the title to a narrow strip of land on which plaintiff's wall stood. The wall was the wall of a storehouse, used by plaintiff as a stable. The defendant built a new wall to his premises, which adjoined, and this dispute arose in the course of building operations. The plaintiff observed that the builder acting for defendant was building immediately against his wall, and he conceived that he was endangering the wall by building over the footings of the wall. Plaintiff accordingly called in the assistance of Mr. Johnston, a builder, who knew the premises and had repaired them for many years past. They together went on the premises and saw Mr. Brett, who was the defendant's builder. Plaintiff and Mr. Johnston told Mr. Brett that he was trespassing on the plaintiff's property because he was building on the top of plaintiff's footings. Mr. Brett had then erected five or six feet of the wall when the objection was taken. An excavation was made and they came upon the foundations of the plaintiff's wall. Mr. Brett thereupon pulled down the five or six feet of wall he had erected and proceeded to build a wall away from the plaintiff's footings. Plaintiff's wall was only a 9-in. wall, and it was his case that the building of an additional wall on the footings on one side was calculated to endanger the plaintiff's ancient wall. Later the defendant apparently returned from a holiday, and he ordered the wall that had been built to be pulled down and rebuilt on the line to which the plaintiff objected. Defendant had brought the roof of his new building right on to the plaintiff's 9-in. wall. The question was whether the plaintiff was entitled to the footings of the wall and whether he was entitled to the part of the wall which had been battered back. The evidence of the plaintiff and Mr. Stalyprice, an architect of Peterborough, and Mr. Johnston, a builder, would prove beyond a doubt that there were footings to the plaintiff's wall and that a great part of these footings had been cut away.

Evidence was then given in support of the plaintiff's case by the plaintiff, Mr. Stalyprice, and Mr. Johnston.

Mr. Terrell, K.C., said his case was that his wall was one homogeneous wall and the plaintiff's property.

Evidence was called in support of this, and this closed the plaintiff's case.

Evidence was then called for the defence.

Mr. W. H. H. Davis, architect surveyor of Spalding and Wisbech, said he had carefully examined the wall and he came to the conclusion that the under part was an old garden wall and one side of it had been battered and on the top another wall was built. The old garden wall was older than the wall built on the top. He formed the opinion that there were two walls there.

Mr. H. Bain, engineer surveyor and superintendent to the Deeping Fen Drainage Trustees, and Mr. George E. Matthews, gave evidence for the defendant. The latter said he inspected the wall with Mr. Davis and had found traces of old walls under both the plaintiff's and defendant's walls. He believed that old walls had been cut down and the foundations used for new walls. He did not find any footings of the plaintiff's wall on the defendant's side.

Mr. Lloyd, a road surveyor, said he had inspected the locus, and saw no footings of plaintiff's wall on the defendant's side.

His Lordship, in giving judgment, said the question was: had plaintiff proved that he was the owner of the six inches of land now apparently in the possession of the defendant, on which plaintiff said his footings stood? He came to the conclusion that the plaintiff had not proved that the fragments of the old wall found belonged to him, and not having proved that his existing wall had footings, that part of his case failed. Next came the question as to the wall itself. Defendant set out to prove that the wall was not the plaintiff's, but his lordship came to the conclusion that the wall was the plaintiff's wall and was not a party wall. He did not believe that the plaintiff was any the worse for having a joist of the defendant's building overhanging this wall. But there had been a trespass on the part of the defendant and he awarded the plaintiff 40s. damages in that respect. As plaintiff had succeeded on one part of the case and the defendant on the other, he gave judgment for plaintiff for 40s. damages for the trespass, and no costs to either side.

Building Contract: Injury to Workman: Alleged Negligence.

Pearce v. Willett.

December 20. King's Bench Division. Before Justices Bray and Lush.

This was an appeal by the defendant W. Willett, the well-known builder of Sloane Street, from a judgment of Judge Selfe at the Brompton County Court in favour of the respondent, George Pearce.

Pearce was a man forty-five years of age and he was employed by and worked for the appellant Willett at the new building for the Blind Institution, Great Portland Street, for which the appellant was the contractor. Pearce was working on the ground floor and was engaged in sending up material in a barrow from the ground floor by a hoist. There were seven floors to the building, and there was a hole from the ground floor to the top floor, where ultimately the lift for the building would be constructed. Pearce complained that there was no board or protection at each of the floors to prevent anything from toppling down this lift hole on to him. Whilst he was engaged at his task one day some concrete came down from one of the floors and struck him on the head, cutting it severely and incapacitating him from work for a considerable period. Pearce accordingly brought his action in the County Court for damages, alleging negligence on the part of the defendant in not having the floors properly protected. Defendant's case was that there was no negligence on his part. The jury who tried the case answered certain questions, and upon those finding the County Court judge entered judgment for plaintiff Pearce for £50 damages.

The defendant now appealed against that judgment.

Mr. Hastings argued the case for the appellant and Mr. Powell, K.C., and Mr. Moyses represented the respondent.

After hearing the legal arguments the Court dismissed the appeal with costs.

Mr. Justice Bray, in giving judgment, said it appeared from the case that a square opening was left on all the floors of the building with a view to a lift being constructed there, and plaintiff worked at the bottom. A piece of concrete came down and struck him on the head. The appellant admitted that there were no guard boards to the floors at all. The first question was whether there should have been guard boards and whether they were reasonably necessary. His Lordship thought on this part of the case that there was ample evidence upon which the jury could find that the appellant had been guilty of negligence under this head. Nor was there evidence that this happened for want of guard boards. It was for the jury to infer whether it did happen for want of guard boards, and they so found. In his Lordship's opinion, the jury were right in their finding and the judge gave effect to that finding. The appeal must therefore be dismissed.

Mr. Justice Lush said the question was whether the appellant was in fault in not having guard boards to the floors in this hole. The jury thought he was, and his Lordship came to the conclusion that these guard boards should have been used as a reasonable precaution for those working beneath. There was evidence from which the jury were entitled to infer that guard boards were a necessary protection to those engaged upon this work. He concurred in the appeal being dismissed.

PROJECTED NEW WORKS.

Cottages, Cossey, Norfolk.

The Forehoe R.D.C. have decided to erect six cottages on a site at Cossey.

Church, Knebworth.

A new church is to be erected at Knebworth Garden Village. Mr. Darby is the architect.

School Chapel, Maltby.

Plans have been approved by Rotherham D.C. for a school chapel, near Leslie Avenue, Maltby.

Houses, Haverfordwest.

Haverfordwest R.D.C. have decided to build sixty-six houses in various surrounding parishes.

Hospital Heating Scheme, Sussex.

The Court of Governors have approved a new heating scheme for the Royal Sussex County Hospital.

Baths, Paddington.

The erection is contemplated by Paddington Council of new central baths at a cost of £42,000.

Fever Hospital, Ripon.

The erection is contemplated by Wath R.D.C. of a fever hospital at an estimated cost of about £3,000.

Addition to Convent, Fulham.

It is proposed to erect a new wing to the Marist Convent, Fulham, to be capable of accommodating 240 pupils.

Bridge, Berwick.

The erection is contemplated of a new bridge over the Tweed at Berwick at an estimated cost of £40,000.

Houses, Fleetwood.

Plans have been passed by Fleetwood U.D.C. for the erection of eleven houses in Carr Road, Tennyson Road, and Dryden Road.

Houses, Dover.

Plans, by Mr. W. Bromley, for the erection of seventeen houses at Buckland, have been passed by the Dover Town Council.

Baths, Levenshulme, Manchester.

Plans are under consideration for the erection, at an estimated cost of £13,500, of new public baths at Levenshulme, Manchester.

Repaving Work, Deptford.

A scheme for repaving some of the principal roads in Deptford is to be undertaken by the local Borough Council at a cost of about £23,000.

Workmen's Dwellings, Bosworth, Notts.

The L.G.B. have sanctioned a loan of £2,189 for the erection of twelve workmen's dwellings at Markfield, under the Housing Act.

Church Hall, Auckland Park.

A church Hall, estimated to cost £1,000, is to be erected at Auckland Park from the designs of Mr. Douglas Crawford, of Bishop's Auckland.

Hall, etc., Llanafan.

An institute, to include a hall and clubroom, is to be erected at the village of Llanafan, the Earl of Lisburne having promised a site free of cost.

Bridge Approaches, Belfast.

Plans have been approved by the City Council for approaches to a new bridge proposed to be erected over the Great Northern Railway at Tate's Avenue.

Hospital Wards, Newark.

Newark U.D.C. have decided to build two additional wards to the isolation hospital, to comprise twelve beds, bathrooms, kitchen, and convalescent ward.

Works, Skipton.

Sanction has been given by the L.G.B. to a loan of £1,340, to be applied by Skipton Council to the construction of sewerage works and surface water drainage.

Sanitary Conveniences, Aldershot.

An enquiry by the L.G.B. has been held into the application of the Aldershot U.D.C. for permission to borrow £765 for the erection of sanitary conveniences.

Municipal Offices, Goole.

Sanction of the L.G.B. has been obtained to the erection by Goole U.D.C. of new municipal offices at a cost of £8,000. Mr. E. E. Fetch, of Westminster, is the architect.

Houses, Hornsey.

Plans have been approved by Hornsey Town Council for six dwelling-houses in Hermiston Avenue, on the application of Messrs. Francis Chambers and Son, of Cannon Street.

Hospital Buildings, Saffron Walden.

Saffron Walden Town Council have decided to apply to the L.G.B. for sanction to borrow £3,355, to be devoted to the erection of additions to the Infectious Diseases Hospital.

Buildings, Houghton-le-Spring.

Plans have been approved by Houghton-le-Spring R.D.C. for additions to hind's house at Bluce House Farm, Leamside (for the Dean and Chapter of Durham); building consisting of refreshment room and two bedrooms, at Herrington Burn (for Messrs. Sharp and Berriman); eleven houses in Station Avenue, Fence Houses (for J. Hodgson); thirty-four houses at Fence Houses (for T. Hodgson).

Institution, Neath.

Sanction has been given by the L.G.B. to the erection of an Institution for the Feeble-Minded on the Drymma site, Neath. The cost is estimated at between £50,000 and £60,000.

Church Repairs, Leuchars, Fife.

It is proposed to repair the parish church of Leuchars (a building of the Norman period) at an estimated cost of £1,200. Mr. Reginald Fairlie is the architect in charge of the work.

Temperance Hotel, Whitley.

Plans have been approved by Whitley and Monkseaton U.D.C. for a new temperance hotel to contain forty-one bedrooms and proposed to be erected on the North Links estate.

Infirmary, Lincoln.

Plans for the erection of a new infirmary, Barton Road, Lincoln, from the design of Mr. W. G. Watkins, are under the consideration of the Board of Guardians. The cost is estimated at £24,100.

Cottages, Hertfordshire.

Four novel cottages, costing £75 each, are to be erected at Little Gaddesden, Hertfordshire. They will be constructed of wood and wood pulp, roofed with thatch, and mounted on wheels.

Improvement, Peebles.

Peebles Town Council have decided to purchase the Cross Kirk and grounds from the Earl of Wemyss and March. The building will be repaired and the grounds laid out as a pleasure resort, the cost being estimated at £500.

Improvements, Scarborough.

Scarborough Corporation have applied to the L.G.B. for permission to borrow £1,150 for the purchase and demolition of the old North Pier buildings, and for £7,112 for the provision of a bowling green near the Royal Albert Drive, and for other improvements.

Workmen's Dwellings, St. Austell.

The L.G.B. have sanctioned the borrowing by St. Austell U.D.C. of £5,062 (to be devoted to the erection of workmen's dwellings) on condition that the by-laws in operation in the district are complied with. As a result, the by-laws are to be amended. Each house is to cost £205.

Hall, University of London Club.

In connection with the establishment of the University of London Club, for which two houses have been leased in Gower Street, the Bedford Estate have undertaken to erect in the gardens at the rear hall 38 ft. by 30 ft., and to carry out certain structural alterations.

Weaving Shed, Leigh.

The Lilford Weaving Co., Ltd., of Leigh, have taken between seven and eight acres of land on Clarke's Charity Estate, near the Leeds and Liverpool Canal, for the erection of a weaving shed which will have accommodation for over 2,000 looms. Plans are being prepared for the erection of sixty cottages round the works.

Town-Planning Schemes.

The L.G.B. have given authority for the preparation of town-planning schemes by the Town Council of Bridlington and the Urban District Council of Newton-in-Makerfield. In the case of Bridlington the scheme is to apply to an area of 2,730 acres, and in the case of Newton-in-Makerfield to an area of 2,518 acres.

Buildings, etc., Huddersfield.

Plans have been passed by Huddersfield Corporation for a Picturedrome, Blacker Road North (for the Palladium Picture Co.); two houses, Osborne Road (for Mr. T. Jury); six houses, Bromley Road (for Messrs. Piper and Co.); and a fifty-yards chimney (for Messrs. J. Hopkinson and Co., Ltd.).

Baths, Mossley.

Mr. J. L. Tattersall, of Altrincham and Mossley, has offered to erect swimming baths and a lads' club at Mossley on condition that the town take over the upkeep and maintenance of the baths and that £150 a year be raised by donations for the upkeep of the lads' club. It is estimated that the scheme will cost between £5,000 and £6,000.

Sewage Works, etc., Oswaldtwistle.

Oswaldtwistle Urban Council have received the sanction of the L.G.B. to the borrowing of £1,805 in respect of the sewage works at Belthorn. Sanction from the same authority has been received for the borrowing of £1,353 in respect of land for street improvements and the provision of a site for the proposed Carnegie Free Library.

Buildings, York.

Plans have been approved by York City Council as follows: Conversion of cottages into motor garage, Hornby's Court, Blake Street; new stand, lavatories, etc., Knavesmire (for York Race Committee); additions to office block, Haxby Road (for Rowntree and Co., Ltd.); motor house, Briar House, Fulford Road (for F. W. Chapman); motor garage, Nunroyd (for N. Green).

Buildings, Christchurch.

Christchurch Board of Guardians have adopted recommendations that application be made to the L.G.B. for sanction to a loan to cover the cost of the workhouse drainage works; and that the plan prepared by Mr. H. Crawshaw for two new cottage homes to be erected to the west of the present Cottage Homes be approved and submitted to the L.G.B. for approval. A new mortuary and a post-mortem examination room are also to be erected.

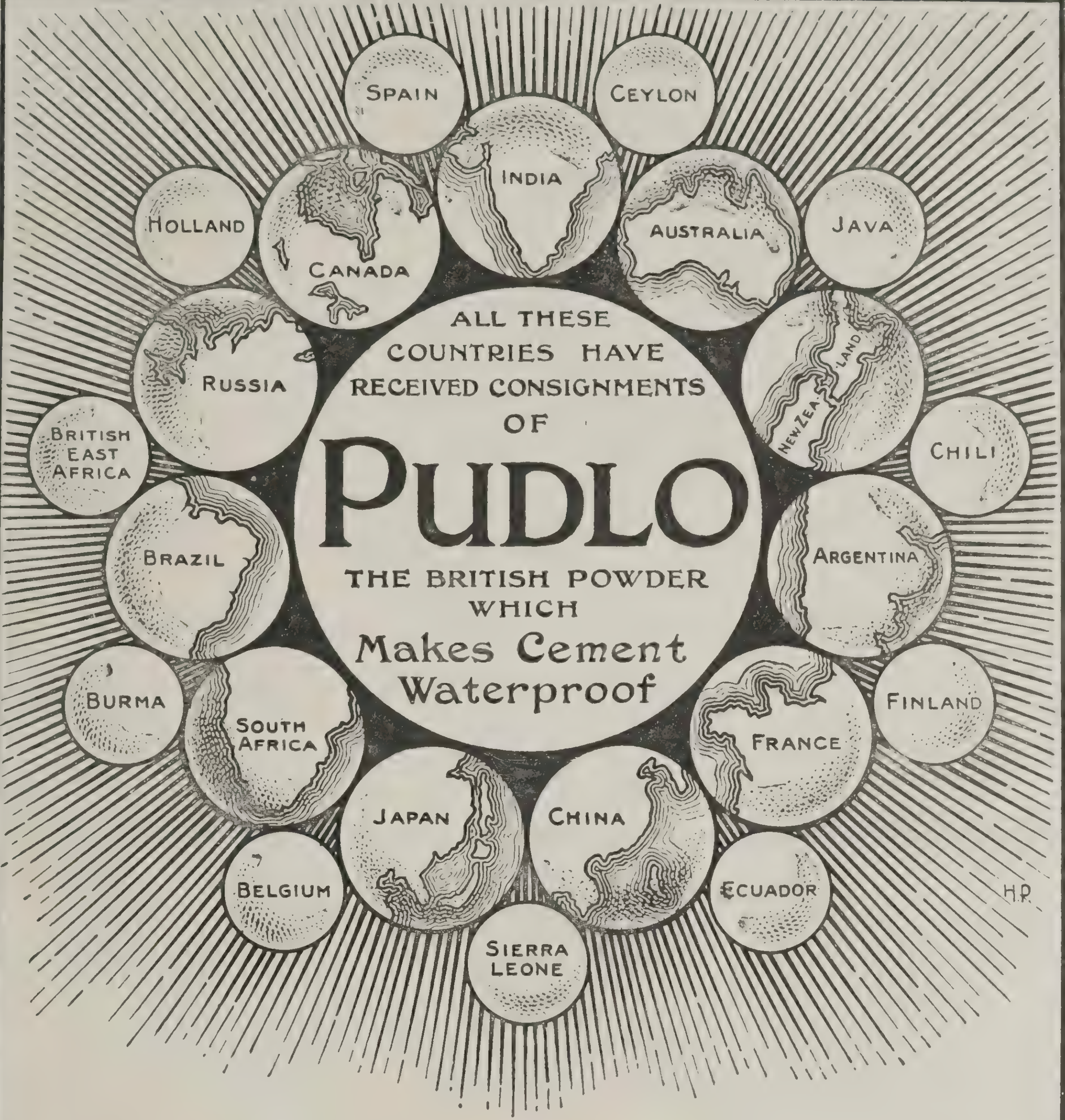
Buildings, Cambridge.

Cambridge T.C. have adopted plans for a new hall in Tenison Road for the Salvation Army; classroom and library in Leys School for the Leys School; garage and house in Bridge Street for Mr. C. F. Fox; workshops in Chesterton Road for the Cambridge Scientific Instrument Co.; garage additions in Green Street for Mr. H. Robinson, Hills Avenue; new shop front, etc., 36, Trinity Street, for Trinity College.

OBITUARY.

Mr. F. L. Pither.

We regret to record the death, on December 17th, at his residence, 91, Tollington Park, N., of Mr. Francis Leon Pither. He was silver medallist at the Royal Academy School in 1874, and won the Queen's Prize at South Kensington School. For over thirty years he occupied the position of mechanical drawing master at University College School, and he was examiner in advanced perspective, etc., to the Board of Education and London Chamber of Commerce. The funeral took place at Highgate Cemetery on Saturday, December 20th.



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ELECTRICAL NOTES.

Wotan Half-Watt Lamps.

Messrs. Siemens Brothers' Dynamo Works, Ltd., recently gave at their Dalston works a Press view of a range of these new lamps, which, it is expected, will be put on the market early in the new year, when the Tungsten Lamp Association has settled what the selling prices are to be. It is expected, however, that the prices will not be much higher than those of the lamps of corresponding candle-power consuming one watt per candle. In general appearance the new lamps are spherical, with a long neck, the bulbs being slightly smaller than the present ones. They will be supplied with Edison screw caps of the Goliath pattern only, on account of the large currents taken, because the lamps will all be of high candle-power, varying from 600 to 3,000 c.p. As they will be supplied for voltages ranging from 50 to 250 volts, it will be seen that the currents in some cases will be heavy. For instance, a 50-volt 1,500-watt lamp giving 3,000 candle-power will take 30 ampères. Hence, the leading-in wires have been given special attention. These are of copper alloy, and pass through a glass tube down the neck of the lamp, one of them being enclosed in a smaller glass tube. The large glass tube is open at its upper end, and fits loosely over a short glass rod. The lower end is sealed, and at this point the leading-in wires are joined to short platinum wires, which have the same coefficient of expansion as the glass. On the other side of the seal copper wires are used again.

The spider which supports the filament is of Constantan wire. It is not rigidly secured to the glass stem, but is supported on a small tube, which in turn is free to move slightly on a glass rod which terminates the stem referred to. This arrangement secures a certain degree of flexibility between the filament and the leading-in wires, a matter of importance where there is vibration. The filament itself is of pure drawn tungsten wire in a continuous length, wound in the form of a small closely coiled spring and arranged zig-zag round the central stem. This form of construction projects the light downwards rather than horizontally, as is the case with the one-watt lamp, and as the filament occupies a relatively small space within the bulb, its heat losses are not so great as with the ordinary filament, and it can therefore run continuously at the high-rated efficiency.

The bulb is stated to be filled with nitrogen at a pressure of about 9 lb. per sq. in., so that when the lamp heats up the pressure increases practically to that of the atmosphere. The presence of this inert gas, instead of a vacuum, constitutes the chief difference between these new lamps and the one-watt tungsten lamps at present in use, because the latter can always be overrun for a short period at an efficiency of half a watt per candle-power. The object of the long neck is to collect any deposit from the filaments by means of convection currents, thus keeping the bulb itself clear and not interfering with the light.

The lamps are rated at 600, 1,000, 2,000 and 3,000 candle-power for 50-60 volts; 1,000, 2,000, and 3,000 candle-power for 100-130 volts, and 2,000 and 3,000 candle-power for 200-250 volts. The high efficiency of one-half watt per candle-power is combined with a life of 1,000 hours at least, with a depreciation in candle-power during this period of not more than 20 per cent. The light is approximately equal to daylight, so that colours can be matched with accuracy. This is a matter of great importance for interiors and exteriors of shops, where it is expected that the half-watt lamps will compete severely with arc lamps and high-pressure gas lamps. The same remarks apply to public halls and all interiors, but it is probable that the other lamps will hold their own for main street lighting and in railway yards, etc. The new lamps will also solve the problem of indirect and semi-indirect lighting, because of their high efficiency.

TRADE AND CRAFT.

War Office Contract for "Poilite."

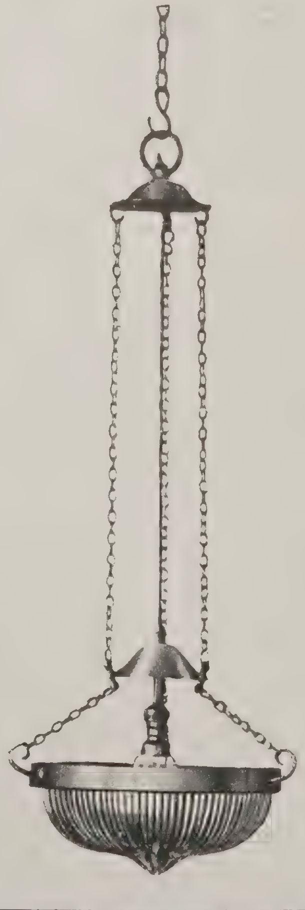
A notification has been issued by the War Office that the tender of Bell's United Asbestos Co., Ltd., of Southwark Street, London, has been accepted for the supply during the three years from December 17th, 1913, of asbestos-cement ("Poilite") roofing slates, wall and ceiling sheets, etc., made at Bell's United Asbestos Co.'s "Poilite" Factory at Harefield, Middlesex.

Change of Address.

The London office of Messrs. George Sands and Son, Limited, has been removed from 37, Strand, W.C., to 31, Old Queen-street, Westminster, S.W. The telephone number is Victoria 7854.

New Directorship.

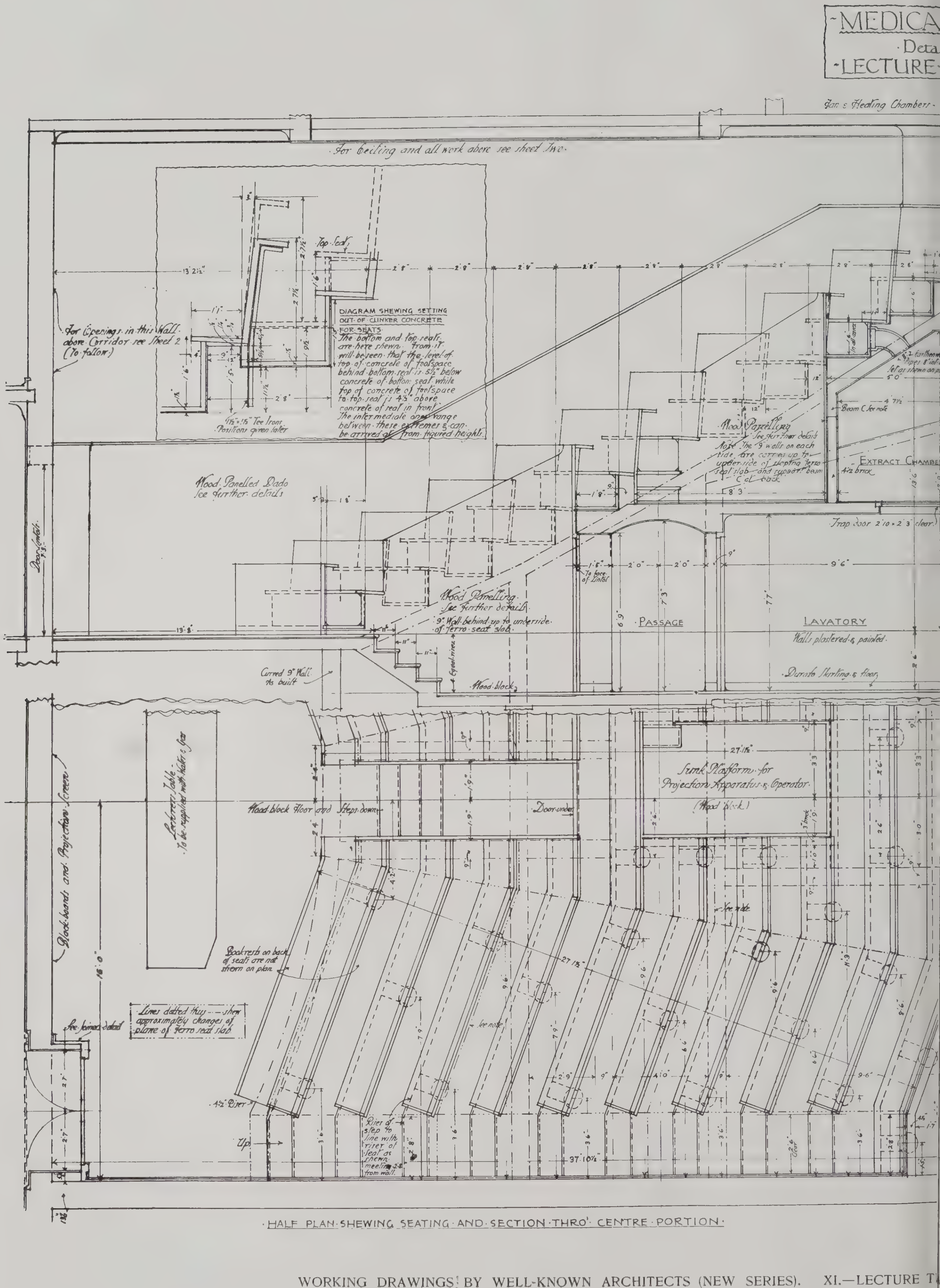
Mr. W. Auerbach has been appointed director of Messrs. Claridge's Patent Asphalte Co., Ltd., in place of Mr. F. T. Cutbill, deceased.



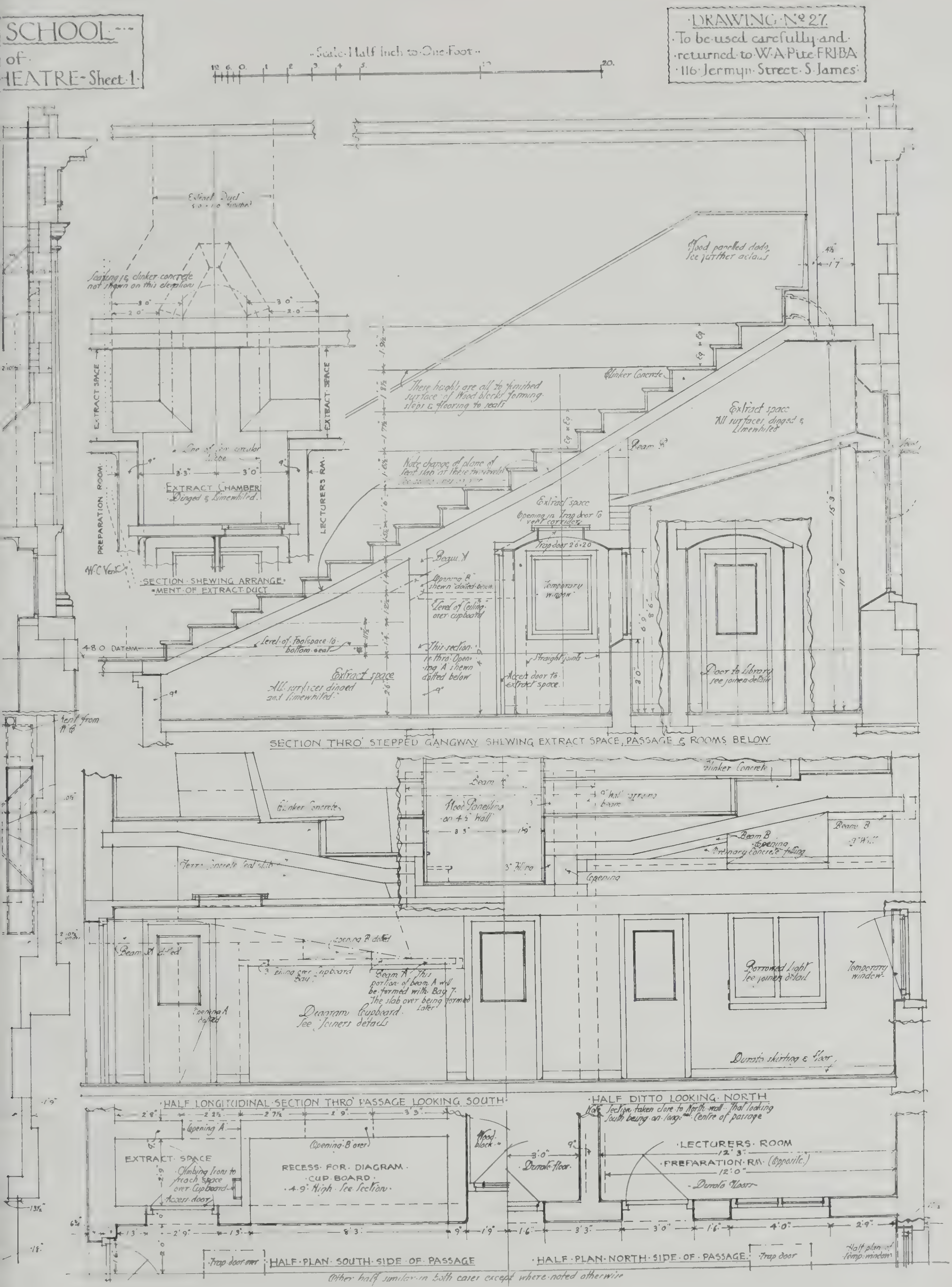
Fittings for Semi-Indirect Lighting.

Many of the leading authorities on artificial lighting, whose testimony is supported by medical officers, regard the semi-indirect lighting system as the best. With this method all disadvantages of the direct method, such as "glare," are eliminated, whilst that "flatness" so evident with the purely indirect system is also avoided. Our new catalogue of semi-indirect fittings is now ready.

Simplex Conduits, Ltd.,
Garrison Lane, Birmingham,
113-7, Charing Cross Road, London, W.C.

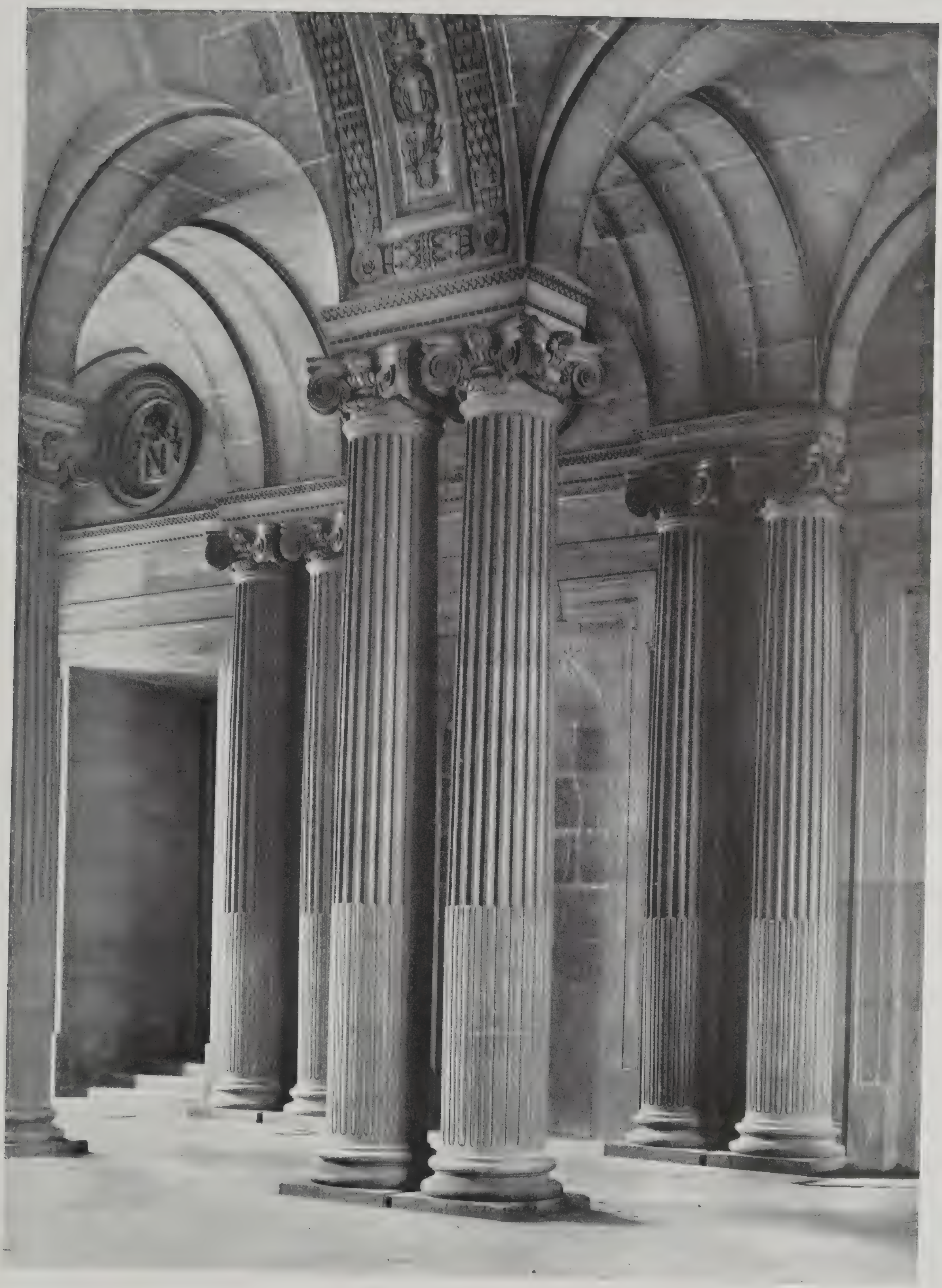

MEDICA
Deta
LECTURE
Fan & Heating Chambers
For Ceiling and all work above see Sheet Two.
For Openings in this Wall above Corridor see Sheet 2 (To follow.)
Top Seat
DIAGRAM SHEWING SETTING OUT OF CLINKER CONCRETE FOR SEATS.
The bottom and top seats are here shewn. From it will be seen that the level of top of concrete of footspace behind bottom seat is 5½" below concrete of bottom seat while top of concrete of footspace to top seat is 4½" above concrete of seat in front. The intermediate ones range between these extremes & can be arrived at from figured heights.
1½" × 1½" Tee Irons Positions given later
13' 2½"
2' 8"
Wood Panelled Dado See further details
Door Lintel
Wood Panelling See further details
Note. The 9" walls on each side are carried up to under-side of sloping ferro seat slab and support beam C at back
Beam C See note
4½ brick
EXTRACT CHAMBE
Trap door 2' 10 × 2' 3" clear.
Wood Panelling See further details
9" Wall behind up to underside of ferro seat slab.
To face of Lintol
PASSAGE
LAVATORY
Walls plastered & painted.
Duroto Skirting & floor.
Curved 9" Wall As built
Wood block
Black-boards and Projection Screen
Lecturers Table. To be supplied with Water & Gas
Wood block Floor and Steps down
Door under
Sunk Platform for Projection Apparatus & Operator. (Wood block)
27' 1½"
Bookrests on back of seats are not shewn on plan.
Lines dotted thus —·— shew approximately changes of plane of Ferro seat slab
See further detail
See note
4½" Riser
Up
Riser of step to line with riser of seat as shewn meeting 2.8 from wall.
37' 10½"
16' 0"
13' 8"

·HALF PLAN·SHEWING SEATING AND SECTION THRO' CENTRE PORTION·

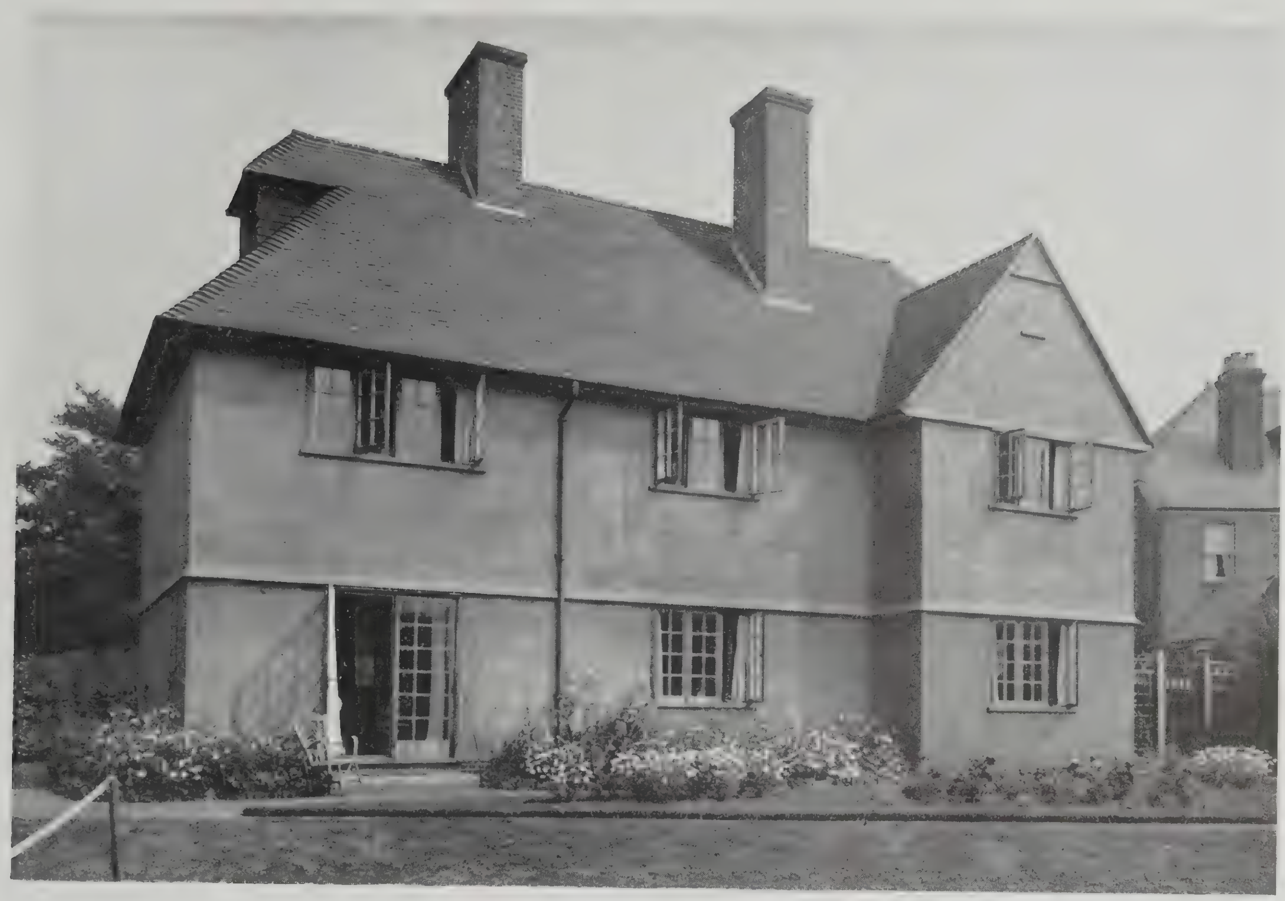

SCHOOL
of
HEATRE - Sheet 1
Scale Half Inch to One Foot
DRAWING Nº 27.
To be used carefully and returned to W. A. Pite F.R.I.B.A. 116 Jermyn Street S. James
Extract Duct
Seating is clinker concrete not shown on this elevation
EXTRACT SPACE
PREPARATION ROOM
LECTURERS RM.
EXTRACT CHAMBER Dinged & Limewhited.
W.C. Vent
SECTION SHEWING ARRANGEMENT OF EXTRACT DUCT
Wood panelled dado see further details
Clinker Concrete
Extract space All surfaces dinged & limewhited
These heights are all to finished surface of Wood blocks forming steps & flooring to seats
Note change of plane of seat slab at these two points
Beam B
Extract space
Opening in Trap door to vent corridor
Trap door 2'6 x 2'0
Beam A
Opening B shewn dotted below
Level of Ceiling over cupboard
Temporary window
This section is thro' Opening A shewn dotted below
Straight joints
Access door to extract space
Door to Library see joiners details
48.0 DATUM
Level of footspace to bottom seat
Extract space All surfaces dinged and limewhited
SECTION THRO' STEPPED GANGWAY SHEWING EXTRACT SPACE, PASSAGE & ROOMS BELOW
Clinker Concrete
Beam C
Wood Panelling on 4½" wall
Beam B
Opening
Ordinary Concrete filling
Opening
Terra Concrete seat slab
Beam A dotted
Opening B dotted
Ceiling over Cupboard
Beam A. This portion of beam A will be formed with Bay 7. The slab over being formed later
Diagram Cupboard See Joiners details
Opening A dotted
Borrowed Light see joiners detail
Temporary window
Duroleo skirting & floor
HALF LONGITUDINAL SECTION THRO' PASSAGE LOOKING SOUTH
HALF DITTO LOOKING NORTH
Note Section taken close to North wall. That looking South being on long. Centre of passage
Opening A
Opening B over
EXTRACT SPACE
Climbing Irons to reach space over Cupboard
Access door
RECESS FOR DIAGRAM CUP BOARD 4.9" High See Section
Wood block
Duroleo floor
LECTURERS ROOM
PREPARATION RM. (Opposite)
Duroleo Floors
Trap door over
HALF PLAN SOUTH SIDE OF PASSAGE
HALF PLAN NORTH SIDE OF PASSAGE
Trap door
Half plan of temp. window
Other half similar in both cases except where noted otherwise

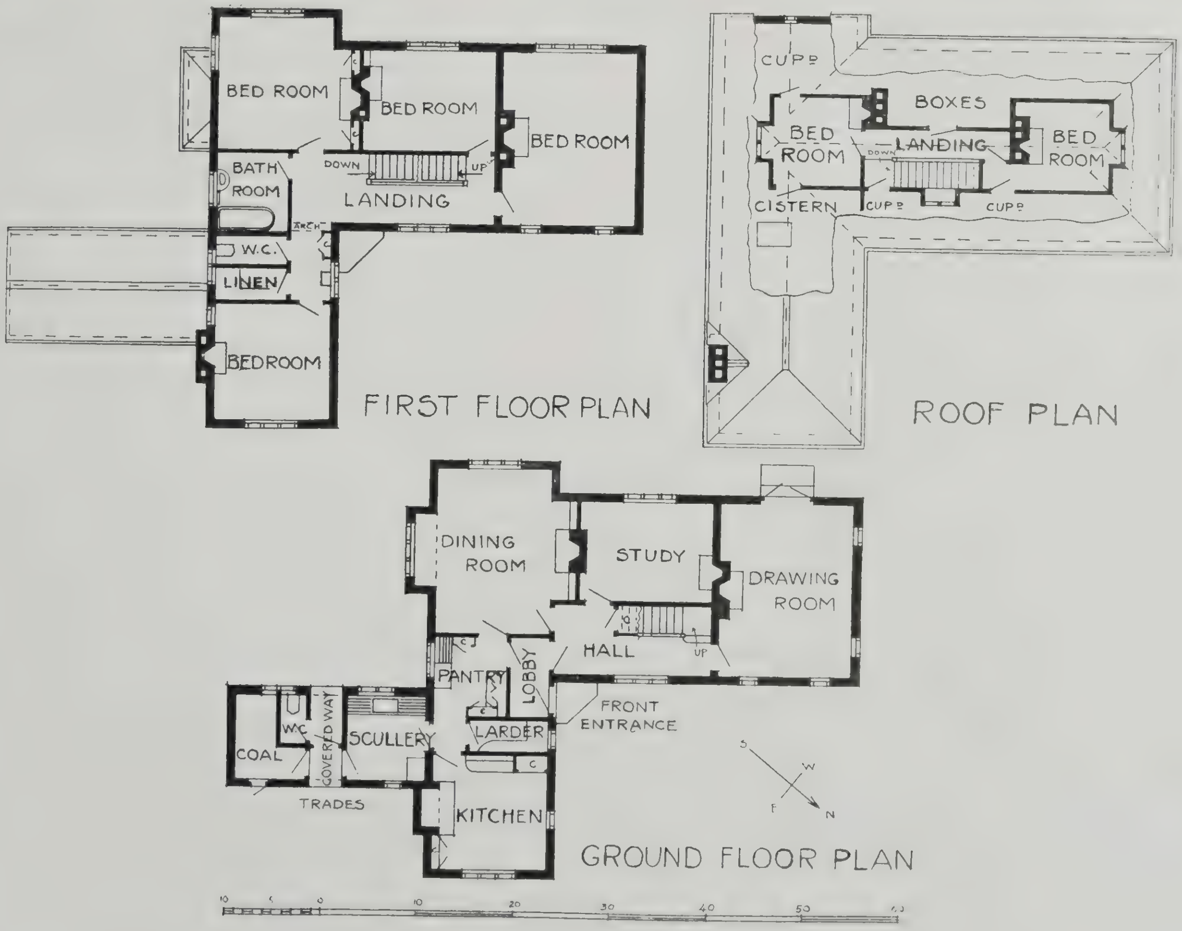
TRE IN MEDICAL SCHOOL, KING'S COLLEGE HOSPITAL, DENMARK HILL, LONDON, S.E.

.B.A., ARCHITECT.



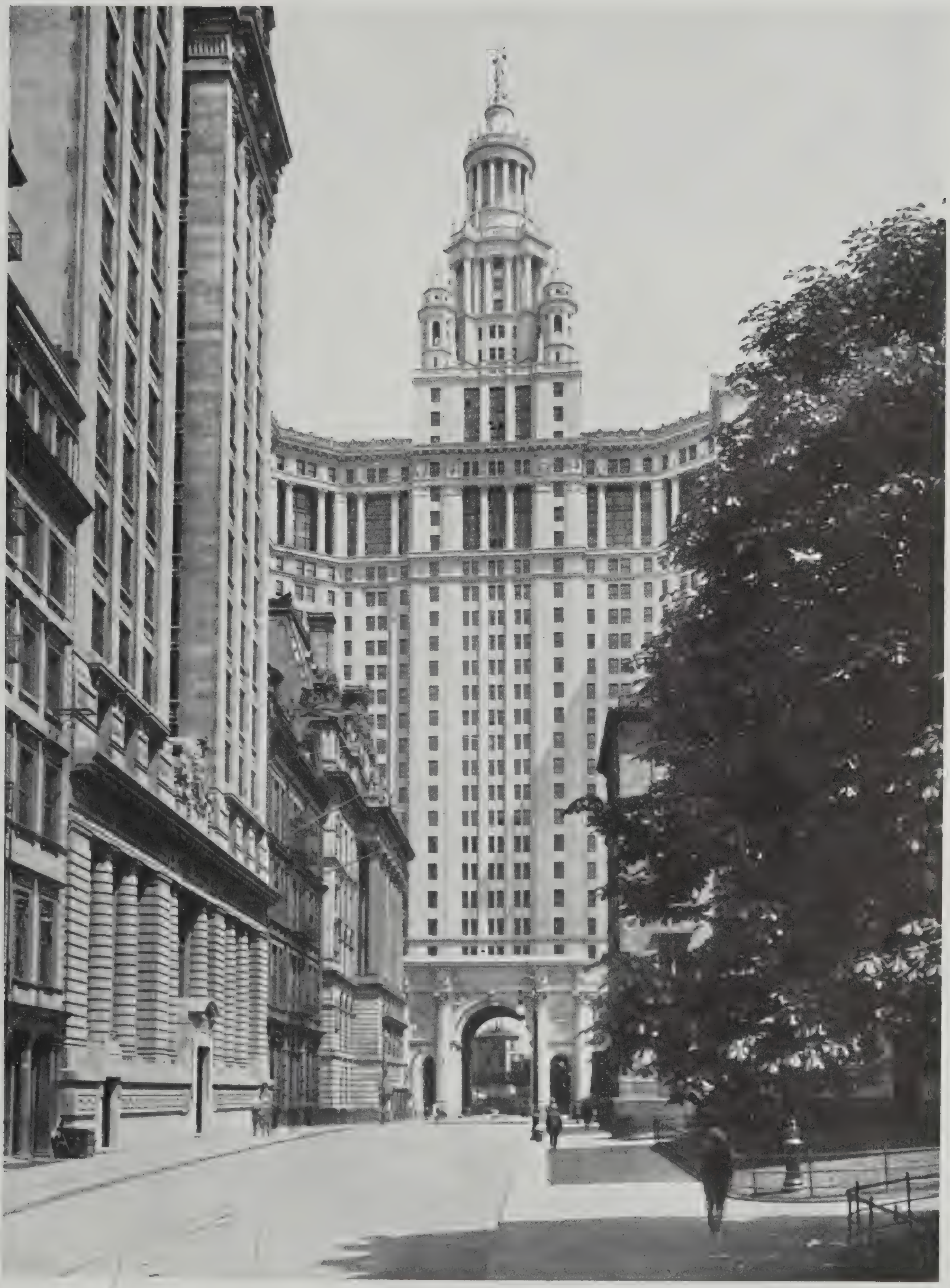
NINETEENTH-CENTURY FRENCH ARCHITECTURE. I.—ARCADED LOGGIA, PAVILLON MARENGO, LOUVRE, PARIS.





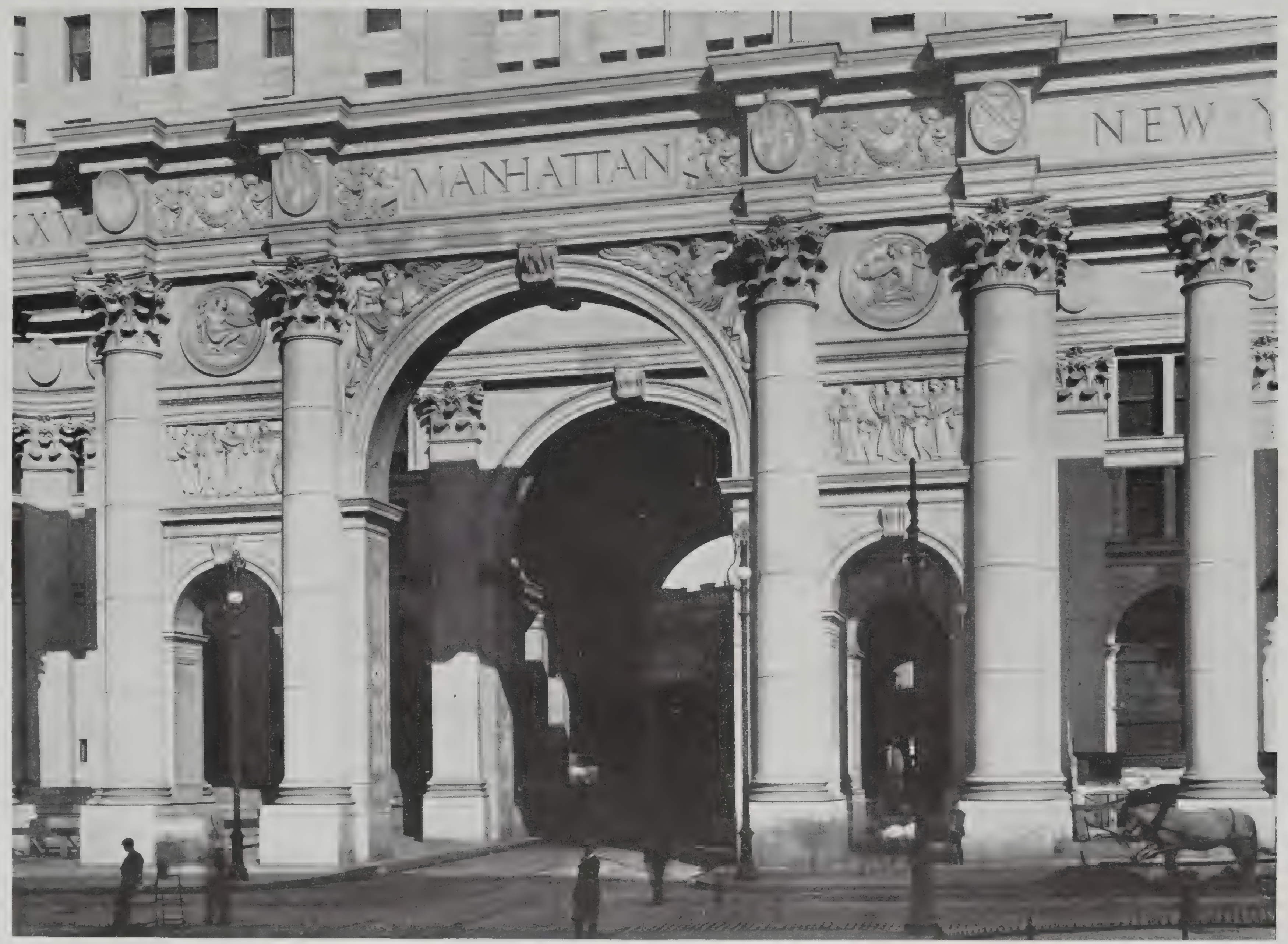
MODERN DOMESTIC ARCHITECTURE. XVI.—MOUNT LODGE, TOWNSEND ROAD, HARPENDEN.

DENIS M. WILSON, ARCHITECT.



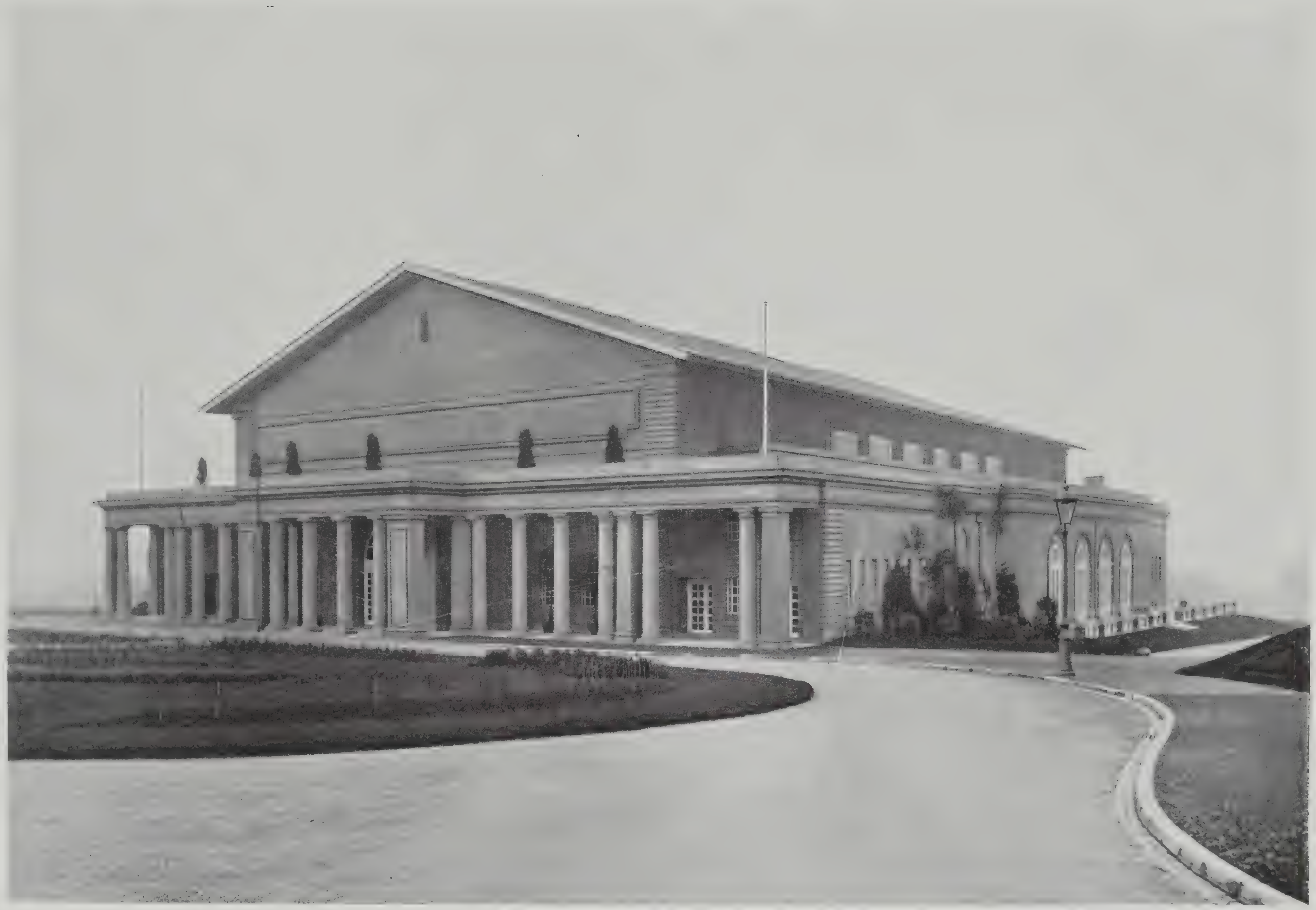
CURRENT ARCHITECTURE. XXXIII.—NEW MUNICIPAL BUILDING, NEW YORK.

McKIM, MEAD, AND WHITE, ARCHITECTS.



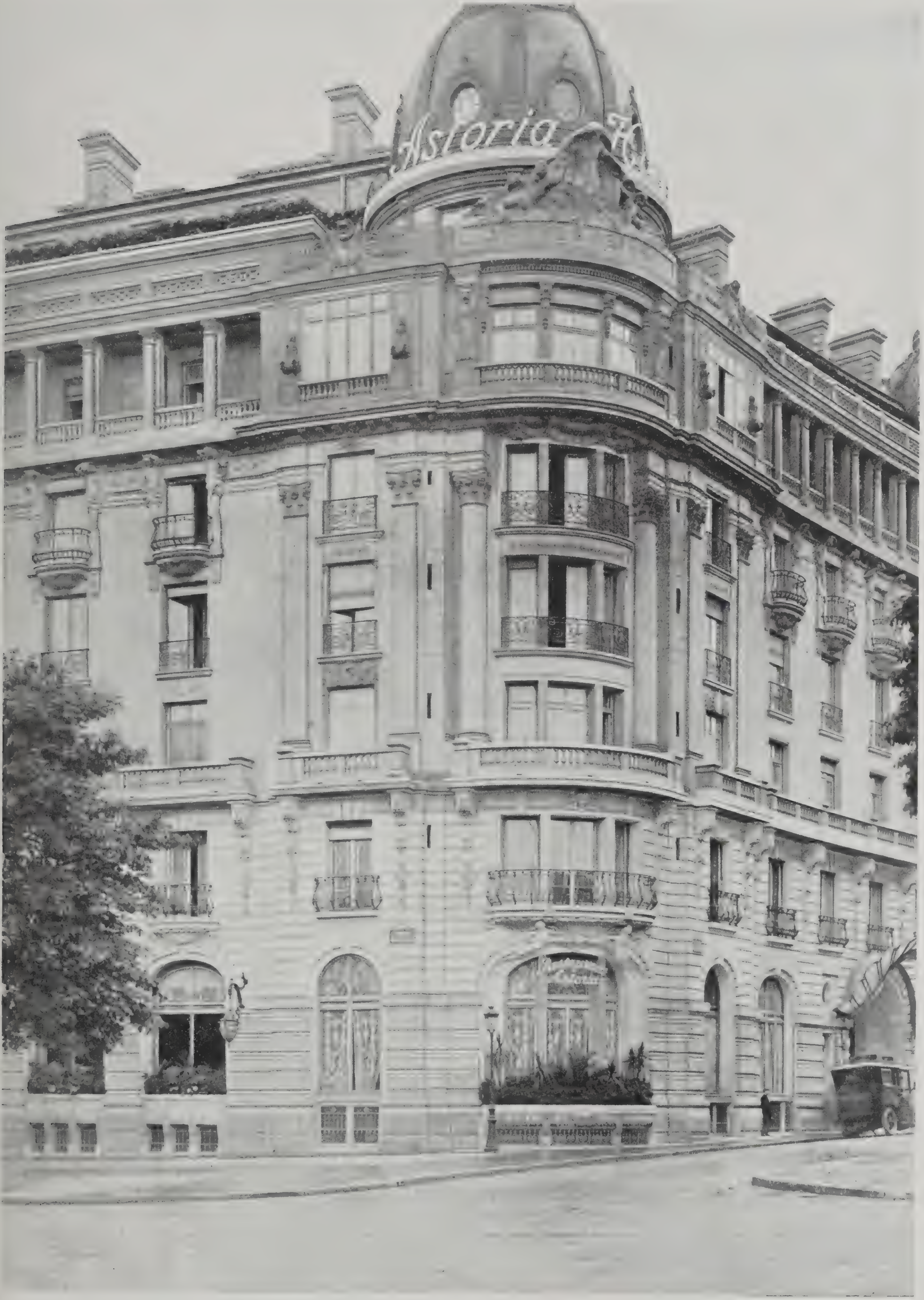
CURRENT ARCHITECTURE. XXXIV.—NEW MUNICIPAL BUILDING, NEW YORK: DETAIL OF ARCHWAY AND ENTRANCE.

McKIM, MEAD, AND WHITE, ARCHITECTS.



CURRENT ARCHITECTURE. XXXV.—NEW PUBLIC HALL, LEICESTER.

STOCKDALE HARRISON AND SONS, ARCHITECTS.



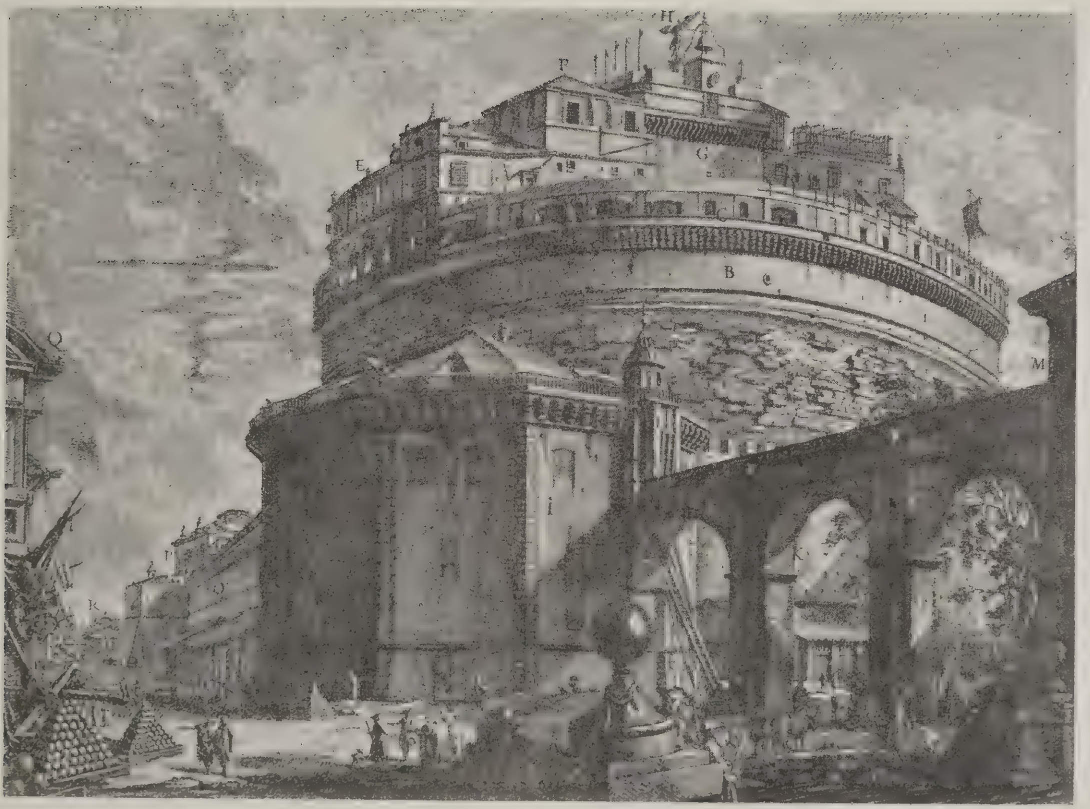
CURRENT ARCHITECTURE. XXXVI.—THE ASTORIA HOTEL, AVENUE DES CHAMPS-ELYSÉES, PARIS.

G. RIVES, ARCHITECT

THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, January 14, 1914. Volume XXXIX. No. 993

No. 67.



(From Piranesi.)

THE ARCHITECTS' &
BUILDERS' JOURNAL.

JANUARY 14, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 993.

The Crisis in the London Building Trade.

ONCE again there is a crisis in the London building trade. It was not unexpected. The events that have led up to it are, of course, more easily explicable than their underlying causes; the former being simple, superficial, and obvious; the latter, complex, deep-seated, and obscure. In the spring of last year, new working-rule agreements were signed between, on the one part, the carpenters and joiners, stonemasons, smiths and fitters, bricklayers, mill sawyers and woodcutting machinists, plasterers, plumbers, builders' labourers, and engine and crane drivers; and, on the other part, the London Master Builders' Association: the men receiving many substantial concessions in wages and in generally improved conditions.

At the very beginning of the document in which the new agreements are set forth is a sentence to the effect that "no exception shall be taken to the employment or non-employment of a man on the ground that he is or is not a member" of a trade society, and it is against repeated breaches of the men's obligations under this condition, and their flagrant disregard of the conciliation rule, that the employers are up in arms. Since the new working rules were signed, there have been as many as twenty strikes against the employment of non-unionists, and presumably every one of these has occurred in deliberate defiance not only of the clause as to non-unionists but of this express provision against strikes: "For the adjustment of all disputes and to avoid stoppage of work, it is agreed that upon a difference arising between an employer or upon the works of an employer and any of his workmen from any cause whatever, notice shall be given by the association or society of the complaining party to the association or party representing the other side, and the subject-matter of dispute shall thereupon be referred to the Board of Conciliation, which shall be summoned within seven days, and, if practicable, shall give its decision within the next six working days."

It is plain that these breaches of agreement involve a double disloyalty: the strikers being disloyal not only to the agreements made in their behalf with the employers, but to the unions of which they are members. It is not apparent, however, that their disloyalty to their unions has been in any way penalised. Absence of proof that firm measures for the maintenance of discipline have been taken in every instance of unauthorised striking is a most disquieting feature of the trouble. Failure to enforce discipline is fatal of a trade union's chief title to respect. If the officials of a union cannot guarantee that the agreements made in its name will be honourably and honestly kept in spirit and in letter, the union becomes useless as an instrument of collective bargaining; and the paralysis of this, its most important function, must sooner or later be followed by the decay of the entire body.

Having met in a generous spirit the workers' demands for all-round betterment, the employers were no doubt utterly disgusted to find immediate indications that the men were determined to deprive them of the sole return for which they contended—the right to employ non-unionists, and the settlement of disputes by conciliation. Grown tired of fruitless remonstrances, they have adopted the only attitude possible to a self-respecting body. They asked for a guarantee that agreements should be faithfully kept, and, failing assurance on this vital point, they had no alternative but repudiation of an agreement which the men were repeatedly breaking with impunity. The position was stated with admirable clearness in the letter sent by the Association to the carpenters and joiners, bricklayers, masons, plasterers, and labourers unions: "After full consideration of the position," Mr S. B. Depree, the secretary, writes, "my Council resolved that, in view of the action of members of your society in striking jobs in violation of the working rules of agreement with this Association, and in the absence of any proposals on your part to exercise control of your members in regard to such strikes, my Association hereby gives you notice that the rules with it are no longer in force."

That is explicit enough; and, so far, it is difficult to see that the Association could, with dignity, have adopted any other course. It is quite obvious that broadly speaking, the employers are right because the workers have put themselves in the wrong. But, coming to points of detail, doubt is at once felt as to the wisdom and practicability of the employers' proposal to set up a guarantee trust fund (to which employers and unions should contribute) as security against breaches of agreement by either side. The unions, it might have been known, were not at all likely to consent to this curious game of forfeits, which would import a new and highly speculative principle into industrial polemics. A cash guarantee as between employer and employed where the two parts stand towards each other in a fixed and definite relationship is a good business proposition, well established in practice; but we doubt very much whether the principle can be usefully applied to the conditions of collective bargaining. One can imagine that the two parties would be involved in endless petty disputes on money matters, varied with occasional heroic efforts to scoop the pool; and, at best, the annexation of accumulated funds could have but little deterrent effect on individuals or on small groups of contributors. Moreover, the existence of the fund would imply the placing of conduct on a cash basis, and would thus tend to the total extinction of that moral sense of honourable obligation which, as the frequent outbreaks of unauthorised strikes seem to show, is already smouldering in the socket.

Of course the real crux of the trouble is the delicate and difficult problem of the non-unionist. This, unfortunately, is a question upon which "feeling" runs high on both sides. Employers cling rather desperately to this their last vestige of liberty, the right to employ a workman irrespective of his being outside the unions; and it would be mere flattery to assume that high principle is their unmixed motive. All employers know quite well that to foster non-unionism is to maintain a reserve force that on occasion is very useful for holding the unions in check, and this is policy rather than principle. As a policy, it may be pushed too far, as it is, for example, when employers refuse to listen to the objections urged against any particular man, who, it might be found, if the case were patiently investigated, was obnoxious not because he was a non-unionist on principle but because he was a renegade, or a defaulting unionist. An employer's lofty disdain of such domestic squabbles, whether it is real or whether it is affected, merely embitters and emboldens the antagonism, and those employers are wise (and they are fairly numerous) who, in any case of formal complaint, act in accordance with careful ascertainment of whether or not the protesting unionists have real grounds for objection. Naturally, the unionist objects to the non-unionist *qua* non-unionist, because "he that is not with us is against us," and because the man who fights and pays for amelioration cannot be expected to relish its enjoyment by a non-contributory interloper. As a means of preventing this irritation, the employers stipulated that there should be no systematic card inspection on the works, and the demand was a perfectly logical sequel to the rule confirming the right to employ non-unionists. It is being disregarded, however, in breach of the covenant.

It remains to be seen whether the employers will proclaim a lock-out; or whether, if they do, this will, in the sequel, provide an effectual remedy for unofficial strikes, "sympathetic" or unsympathetic. Whether or not it secured this object, it would be at best a desperate remedy, involving inconvenience, loss, and suffering to many thousands of people who have no manner of responsibility for a dispute that may easily and swiftly acquire the magnitude of that industrial Armageddon which alarmists so freely foretell, since the real point at issue is not peculiar to the building trade, but is common to all organised industries. It is nothing less than the question of supremacy as between the rival organisations of employers and workmen in every industry or calling. The London dispute, therefore, needs very delicate and tactful handling.

F. R.

The Registration Question.

THE Royal Institute of British Architects met on the evening of January 5th for the discussion of the charter and registration proposals, and a statement was subsequently issued to the Press that it had been unanimously resolved to adopt the Counil's recommendation to apply for a new charter establishing a Register of Architects. An amendment in favour of promoting a Registration Bill n Parliament was lost. This is precisely what was expected, and the scheme is, so far as it oes, the best that could be devised under the circumstances. But any decision as to the Licenate question was reserved for further discussion, and until the contemplated position of their class has been clearly defined it is impossible to predict how the cheme of "Chartered Architects" will work out. In ur issue of December 17th we expressed our view of he suggestion that Licentiates should be entitled to ote, and to rank as "Chartered Architects" on a level with Associates and Fellows. We pointed out that he public, once they had accepted the title "Chartered Architect," would not stop to consider the difference etween the three grades of the Institute's memberhip; and we indicated a method whereby the Institute ould get over the difficulty, viz., by making it easy for dequately qualified Licentiates to become either Associates or Fellows. It would gratify us, therefore, o know that the Institute had some policy of this kind n view. There is one other point. The decision to pply for a charter may not be regarded as ntagonistic to the Registration Bill promoted by the ounger Society of Architects which we outlined last eek. It merely postpones a Parliamentary Bill until more favourable opportunity.

Westminster Hall.

WESTMINSTER HALL has for some time past been in the hands of the Office of Works restorers, but the committee of experts called in to supervise the operations have not yet decided upon a definite plan of restoration. The most precious part of the Hall, and therefore the object of greatest solicitude, is, of course, the hammer-beam roof, with its carved angels, undoubtedly the finest example of open Gothic work in the kingdom. Fuller's allusion to its "cobwebless beams" recalls the familiar tradition that these were constructed of a particular wood (Irish oak) in which spiders could not live; but it is painfully evident to-day that the spider's absence has been the beetle's opportunity, for what the roof is suffering from is the ravages of the latter insect, combined with dry rot. Happily it is believed that the hammer-beams and rafters can be repaired without much injury to their structure or ornament. This, of course, is the only condition under which "restoration" would be worth undertaking at all.

A Combine of Combines?

IN the "Yorkshire Post" of January 5th, and the "Financial News" of the following day, there appeared a letter from Mr. Donald, managing director of the firm of Rownson, Drew, and Clydesdale, merchants, in which it was alleged: (1) That the various materials which go to make up a modern building are practically all controlled now by separate combines; (2) that it is now proposed to combine these combines, so forcing users of materials to bow to the diatribes of every section; and (3) that his own firm had been boycotted, as regards the purchase of materials from firms within the Trust, in consequence of his refusal to join the combine. Mr. Donald is further represented as having expressed himself to newspaper interviewers with even more emphasis, saying that "practically every factor employed in the building of a modern house is now controlled by a Trust. The bricks in the wall, the rain-pipe fastened to it, the stoves inside, the taps on the cistern—everything is controlled by Trusts." Now, it is an open secret that for years past there have existed "rings" in the building trade for the purpose of maintaining the prices of certain materials, and that the policy of these associations has not always been strictly confined to "maintaining." It is also true that the object of the Trust is that of raising and keeping up the price to the buyers of goods and articles made for and supplied by its members, and that this is effected by a pooling arrangement. But this, although it may be the road to one vast monopolistic Trust, is still a considerable distance from that Trust itself, and the more sensational of these newspaper disclosures should be accepted with reserve until more definite proof of their veracity is forthcoming. The fact of the matter is that at the present moment the building trade, thanks to the Labour trouble, price-cutting, and other adverse influences, is in the chaotic condition that offers an easy target to any panic-monger who comes along.

Housing and Town-Planning Act, 1913, Memorandum.

A MEMORANDUM relative to the operations under this Act was issued last week by the Local Government Board. This document records that the local authorities have made extensive use of the powers conferred on them by Section 15 of the Act, under which if a landlord fails to comply with a notice to execute specified works to render a house "in all respects reasonably fit for human habitation," the local authority is empowered to execute the works at the landlord's expense. Notices in respect of 51,915 houses were served in 1913. "In addition," we read, "to the repairs and improvements to dwelling houses by means of formal action under Section 15, local authorities secured the execution of a large amount of work for the improvement of houses by means of representations to, or negotiations with, owners without resorting to formal notices. We should like to think that the method of negotiation and representation was gaining ground. Several cases of gross hardship inflicted by the rigid working of the Act have come to our notice, some of which might easily have had their severity mitigated by friendly discussion between authority and owner. A property may have been in possession of a family since a date when Housing Acts were undreamt of, and its failure to fulfil the conditions of the Act may involve an expenditure altogether out of proportion either to its sins of omission or the ability of the owner to pay. In such a case some relaxation of the strict letter of the law, without the sacrifice of the objects which it is intended mainly to achieve, would remove a good deal of the resentment that lingers, in certain quarters, against what is considered the harsh administration of a beneficent measure. The Act cannot of course be enforced too rigorously against houses in a state so dangerous to life and limb, or so injurious to health that they can only be demolished. But we think there is a case for using discrimination between the widely varying types of owners.

An Example from Birmingham.

BIRMINGHAM is generally regarded as a city of mushroom growth, but there are, nevertheless, a number of interesting buildings of the Georgian period both within and without the civic boundaries. The proper registration of these is a matter of some importance to architects. This good work has now been started by the local Architects' Association, and measured drawings of all the noteworthy houses are to be recorded for the benefit of those who wish to consult them. We should like to see this example followed more generally than appears to be the case. It is true that the Official Survey covers the same ground, though necessarily without the care for detail to be expected of local architects. But the Official Survey works slowly—so slowly, indeed, that, according to a careful estimate based upon the time occupied in the Survey of Buckinghamshire, its labours will last a hundred and sixty years unless some method of expediting matters be found. The covering of the ground within a reasonable period, therefore, must depend largely upon local effort, voluntarily given as in the case of the Birmingham architects, whose example may be heartily commended to architects throughout the country. The educative value of these drawings is very great, and, incidentally, voluntary effort along the same lines might materially supplement and assist the Official Survey.

A Crystal Palace Scheme.

IN advocating the establishment of a British Folk Museum at the Crystal Palace, Mr. W. Ruskin Butterfield has doubtless been influenced by the widespread formation of similar institutions in various parts of Europe during the last quarter-century. The idea underlying them is to display their objects as far as possible in related groups; and the present proposal is to set up an open-air museum in the Palace grounds, where historic houses of interest could be re-erected strictly in accordance with their original form. They would be fitted and furnished according to the mode of their day, and the same scrupulous regard for historical detail would be extended to their gardens. Churches and structures such as ancient barns and water-mills would be included. A portion of the grounds would be laid out for the old national games and pastimes, such as bowling, maypole dancing, and historical pageants. The thing of course has been done before, but only sectionally: that is to say, we have had glimpses of Tudor London at Earl's Court, maypole dancing in the garden suburbs, and pageants nearly everywhere. Obviously this is the moment for the artist and the archæologist, the designer and the constructor to lay their heads together, and produce something that will correlate the former arts of English life with a completeness and unity never before achieved.

A Model of Imperial Rome.

M. BIGOT'S relief of Rome, which is destined for the Sorbonne, attracted a good deal of attention at the autumn Salon des Artistes Français, the jury of which awarded M. Bigot the Grand Medal of Honour. This work has cost its author ten years of labour, the four years' sojourn at the Villa Medicis, as provided under the terms of the Prix de Rome, having proved quite insufficient; the result is a striking testimony to his patience in archæological research. The model is at present in plaster, but arrangements have been made for bronze-casting. A sum of 80,000 francs has been voted by Parliament for the purpose. Rome in the fourth century—which is the period chosen by M. Bigot for his representation—touched her highest point of Imperial grandeur. Her theatres, stadiums, circuses, basilicas, baths, triumphal arches competed with each other in sheer magnificence; and in recreating them and the lesser dwellings that surrounded them M. Bigot has done something to recall the thought and spirit of the race who built them.

OUR SPECIAL ISSUE.

THE hopes we entertained in regard to our "Edition de Luxe," which was published as a special issue dated December 30th, 1913, have been fully realised. There has been a very great demand for the issue, which is rapidly going out of print; hence we would urge those who have not yet secured a copy to do so without delay, otherwise they will be disappointed. We have reason to know that the special features of the "Edition de Luxe"—the series of portraits of presidents of the Royal Institute of British Architects, and the 32 plates of cheap houses for workmen, labourers, and small-holders—have been very much appreciated, while the illustrated survey of the "Events of the Year" has lost none of its former attractiveness.

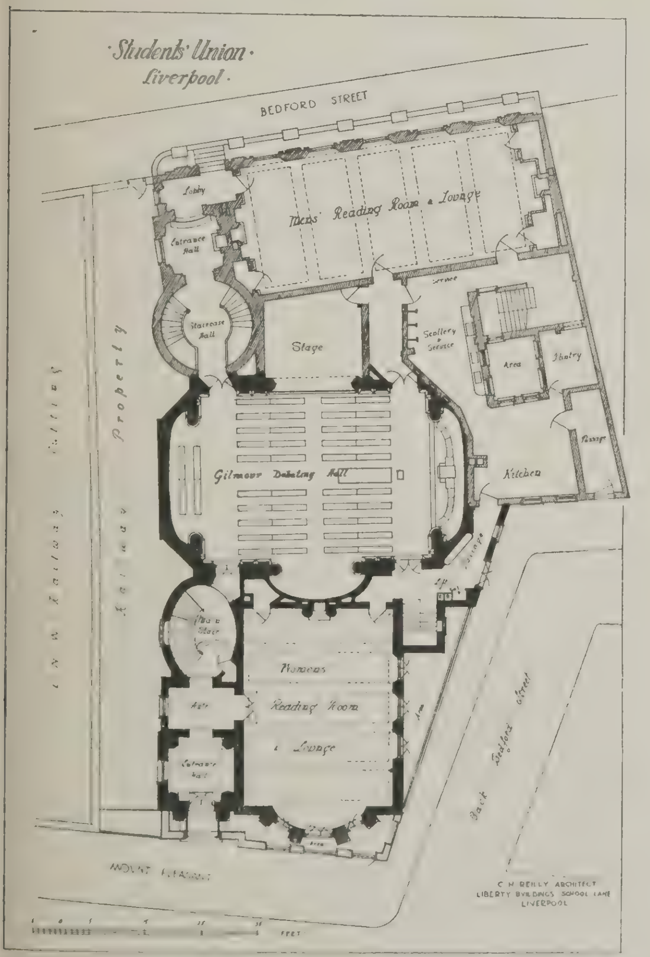
A curious error has crept into the series of R.I.B.A. presidents' portraits. Mr. R. Stephen Ayling, F.R.I.B.A., draws our attention to it. He says: "In looking through your excellent 'Edition de Luxe' I notice on page 603 a portrait of the late Mr. Charles Barry, the eldest son of the late Sir Charles Barry. The former gentleman was President of the Institute from 1876 to 1879. Your letterpress under this photograph refers to the work executed by Sir Charles Barry, R.A., who obtained the Gold Medal of the Institute in 1850, and who died in 1860. He, however, never occupied the presidential chair. The late Mr. E. M. Barry, R.A., and the distinguished engineer, Sir John Wolfe Barry, K.C.B., who is now happily with us and in active practice, were the brothers and not sons (as stated in your notice) of our late distinguished president." This error arose of course from the fact that both the father and the eldest son bore the name of Charles, and this gave rise to the impression that the portrait was that of the architect of the Houses of Parliament before he received his knighthood.

Messrs. John Tanner and Son, of Westminster, desire us to point out, in connection with the New Theatre, Manchester, illustrated in the issue, that they carried out not only the whole of the internal decorative plasterwork, as stated, but also the façade of the theatre in their patent "Ferrocon" imitation Portland stone

THE PLATES.

Gilmour Hall, Students' Union, Liverpool.

THE scheme of a club-house for the students of Liverpool University has been still further advanced by the recent completion of the Gilmour Hall. As will be seen from the plan below, this comes in the centre of the building, between the men's and women's wings, and is intended primarily as a debating hall, though it will also be used for concerts and other entertainments. As an example of modern design in the Classical style it is extremely interesting, particularly as being the work of Professor Reilly, whose School of Architecture at Liverpool University has declared itself so boldly for the study of monumental Classic. There is a sense of scholarly dignity about this hall which is eminently in keeping with its purposes, an austerity of appearance combined with much grace and attractiveness. From the point of view of architectural design, one is arrested at once by the good proportion maintained throughout and the resource displayed in the design of the enrichments. The use of the Greek Doric order in a modern interior is rather a novelty. The order, adapted to new needs, is used with great freedom, and there is ample justification for the columns being engaged instead of standing clear. It is this adaptation of the established forms of Greek architecture that gives the term "Neo-Grec" a right to its title, the underlying principle being quite different from that which produced the Greek Doric chapels of the early nineteenth century. Professor Reilly is certainly to be congratulated on the result he has here attained. The hall, it may be added, was, with its furniture, the gift of Capt. Gilmour, of Liverpool, and has cost about £5,000. Messrs. J. and G. Chappell, of Liverpool, were the general contractors, Mr. William Riding being the clerk of works. The "stuc," or stone plasterwork, was executed by Messrs. John Tanner and Son, of London and Liverpool.



STUDENTS' UNION, LIVERPOOL: GROUND-FLOOR PLAN.

C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.

New Building for the Société Générale, Paris.

This building, which has been erected at the junction of the Boulevard Haussmann and the Rue Halévy, affords an interesting example of the treatment of a corner site, the angle of which is cut by the not unimposing façade. The architectural features of the façade resemble those of many other modern French buildings of a public character, and do not call for special remark. The architect is M. J. Hermant.

Houses in Corringham Road, Hampstead Garden Suburb.

The courtyard plan of housebuilding has flourished in the Hampstead Garden Suburb, and has nowhere been treated with better success than by Messrs. Barry Parker and Raymond Unwin, the architects of these houses in Corringham Road. As will be seen in the plan, the arrangement is that of a quadrangle bisected by the roadway. The photograph we show represents the houses on the south side of the road, which were built before the corresponding buildings on the north. Built of red bricks, with tiled roofs, the houses are finished with stonework for their chief entrances and their upper storeys, with pediments.

Students' Drawings. III.—Temple of the Victorious Hercules. Composition by M. Henri Mayeux.

This is an imaginative design by a student of the Beaux-Arts, executed within the last quarter of the nineteenth century. It is interesting as an example of the class of work that the Beaux-Arts training produced about 1880.

Working Drawings of Dome to National Museum of Wales, Cardiff.

We reproduce another of the fine set of working drawings prepared by Messrs. Smith and Brewer for their new building in Cathays Park, Cardiff. We may remind our readers that these drawings are made on the American system of showing every detail of construction and material.

⁂ As in future the illustrations in this journal, in the majority of cases, will be from photographs of buildings, the Editors invite architects to submit photographs of their recent work. When the illustrations are given as full-page plates, twenty-five copies on art paper will be sent to the authors. Architects will realise that many conditions, which may not occur to them, cover the selection of illustrations for a technical journal, and that when photographs are not used it does not necessarily imply that the work is not worthy of publication: it may happen that at the moment the illustrations do not fit in with the general scheme.

NO. 75, DEAN STREET.

LONDON is likely to lose another of her historic houses, owing to the lack of any public authority to ensure their preservation. The house in question is that next door to the Royalty Theatre, in Dean Street, Soho, which is believed to have been the residence of Sir James Thornhill and his son-in-law, Hogarth. There is a painting on the staircase that is thought to have been their joint-work; and the staircase itself, of oak, has a balance in design and a beauty that bring it into much the same category as Ashburnham House. The exterior is plain-featured Georgian, but includes a fine Classical doorway. The house was in the market about eighteen months ago, when a purchaser acquired it in the hope of reselling to somebody who would devote it to antiquarian or artistic purposes.

This hope has been disappointed, and it is feared that the house will disappear altogether.

HERE AND THERE.

WE were under the impression that Dr. Johnson had really said "Let us take a walk down Fleet Street," until a newspaper controversy same years ago proved George Augustus Sala guilty of having invented the saying as an appropriate heading for his regular column in the "Daily Telegraph. However, as serving our own present purposes, we will still accept the familiar phrase as authentic. Let us take a walk (or a 'bus) down Fleet Street.

Starting at the western end, we have cause at once for reflection, for does not that poor thing, the Temple Bar Memorial, block the middle of the street at the entry into the City, leaving a roadway only 15 ft. wide on either side? What shall we say of a width of 15 ft. for a main artery in the greatest capital the world has ever seen? Sir Horace Jones is credited with the architectural design of the Memorial, but I have not been able to trace the actual author of the scheme. It is certain, however, that it was as cordially disliked when it was first mooted as it is to-day. At the opening ceremony, indeed, on November 8th, 1880, quite a hostile crowd collected. A contemporary writer in one of the building papers said: "The more the structure was looked at, the more clear the fact became that its position was due to a mistake, and that it must inevitably be removed before long." But Birch's griffin still looks wildly westwards, and Boehm's statues of the Queen and the Prince of Wales, together with the bas-reliefs of C. H. Mabey, continue to receive their quota of grime. The western side of the plinth coincides in position with the west side of Wren's Temple Bar. From that point eastwards, therefore, everything is within the jurisdiction of the City. There appears to have been a great desire to push on with the work as fast as possible, and thus it happened that the Memorial was three-parts up when the City authorities remembered that they had never obtained permission from the Strand Board of Works to encroach a few feet on the roadway, in order that the little "island" might be completed. Though sadly behindhand, they hastened to make formal application. The Strand Board refused it, being of the opinion, like many other people, that this Memorial in the middle of a narrow street was a wretched obstruction. The City authorities thereupon sent a deputation to the Strand Board, asking them to reconsider their decision, and the Board by 18 votes to 12 declined to do so. What were the subsequent proceedings I cannot say, but it is obvious that, as the "island" has long since been finished, the opposition of the authorities on the western side must eventually have been overcome.

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With this little retrospect we can commence to look at what Fleet Street offers in the way of façades. The bulk of the work is the merest hotch-potch. Design of all kinds is to be found here, most of it being in the very worst taste and displaying a wealth of badly remembered detail. Moreover, the façades are rendered more unsightly by the clamouring titles of all the newspapers of the kingdom, which succeed in confusing one another, and everybody else, in a vast orgy of giant letters. The letters, however, have this merit—in many cases they help to obliterate architecture which displays even more flagrant defects than their own. So we will not attempt any house-to-house visitation, which would be profitless, but will just pick out the few buildings which merit attention.

First, we come upon Child's Bank, on the south side, close to the Temple Bar Memorial. This is the oldest banking house in the City of London. It has been rebuilt at various times, the existing façade being a very admirable piece of work by John Gibson.

On the opposite side of the road is Street's clock tower of the Law Courts, for which I have considerable admiration, and next to it the Law Courts Branch of the Bank of England, of which the late Sir Arthur Blomfield was the architect. There are two things about this latter building that have always struck me. The first is the polished granite columns of the windows, which, like the rest of their kind, stubbornly maintain their glossy surface, faultless and uninteresting, while the good Portland stone around has weathered to a beautiful white tone. The second thing that has caught my attention is the wrought-iron grille over the entrance gates. This is an extremely graceful piece of design, reminiscent of the forms which were so extensively adopted for Georgian silverwork.

On the adjoining building of Messrs. Attenborough, at the corner of Chancery Lane, it is worth while to notice a very pleasant little figure, a sort of Venetian troubadour, in a niche, though I cannot say much in commendation of the building itself. The premises occupied by Messrs. Partridge and Cooper on the opposite side of Chancery Lane have a little more to commend them, more particularly a bold cornice, which must surely be one of the biggest cornices in London.

A little way eastward on the same side we come upon one of the few really good buildings in Fleet Street—the quiet façade of the London City and Midland Bank, by Sir John Soane. Made up of simple elements, it is just pleasing enough to miss being tame.

* * * *

We must now cross the road and retrace our steps a little in order to survey the most delightful building which Fleet Street contains—Wren's gateway to the Middle Temple. It is quite an unpretentious design, and if we analyse its parts they are elemental enough, but the total effect is most captivating, and the eye rests on its quiet façade as upon a plain piece of gold in the midst of a medley of garish trinkets. On one side of the gateway there is a little room where the weary night porter was wont to doze, in the days when Fleet Street was the home of coffee taverns. As Macaulay says: "The coffee house was the Londoner's home, and those who wished to find a gentleman commonly asked not whether he lived in Fleet Street or Chancery Lane, but whether he frequented the Grecian or the Rainbow." The celebrated Fleet Street taverns, however, we must pass with the bare reflection that if Tennyson immortalised the "Cock," Ben Jonson did the same for the "Devil." So let us hurry on.

We may pass without comment the terra-cotta façade of the Law and General Assurance office by Colonel Edis in order to consider something more interesting, No. 17, Fleet Street. There is perhaps no building in the street which has had such a curious history as this. Built originally in the time of James the First as the offices of the Duchy of Cornwall, it came to be used in later days for purposes as strange as they were various, not the least being Mrs. Salmon's celebrated waxworks, which were as much an institution of the eighteenth century as Madame Tussaud's is now an integral part of the British Constitution. Up to within quite recent years the building had a false façade, whereon was written that fictitious title, "The Palace of Henry VIII. and Cardinal Wolsey," and it was only when the London County Council took possession of the place that the original work was revealed. At the same time the ceiling of what was originally the Council Room of the Duchy, on the first floor, was taken down in pieces and restored at South Kensington under the direction of the late Sir Casper Purdon Clarke.

We have as yet proceeded only a little distance, but the available space is exhausted, and we must continue therefore next week.

UBIQUE.

THE BUSINESS SIDE OF AN ARCHITECT'S OFFICE.

VERY practical interest attaches to an illustrated description of the offices and business administration of what is perhaps the most famous firm of architects in the United States—Messrs. McKim, Mead, and White. Messrs. McKim and Stanford White are no longer alive, but the traditions of the firm are upheld by Mr. Mead and four partners, and the artistic standard of their achievement continues to command the deepest respect from the profession in America and elsewhere. The firm, indeed, has become historical, and this description of its organisation and methods will be welcomed by our readers.

The plan for the new office, which we reproduce, ndicates the position of the "Information" desk, where an usher receives a caller as he arrives by the elevators and conducts him at once to any of the three reception rooms or to the lobby of the business office, as the case may demand. The general scheme of the plan is quite obvious to an architect who, however, on seeing the office, will be surprised at the eal extent of the place and the spaciousness of the 'Business Office" and "Filing Room," which are eally all one sky-lighted room. And a busy spot, oo, is that centre of the physical activities of the ffice. The skilled man at the telephone switchoard can place an outsider in instant communicaion with a member of the firm, or with the inquirer o some assistant qualified to answer the call. here are four telephone booths and a dozen nnunciators distributed about the drafting room.

The large reception room, however, is the centre f interest to the visitor. The long mahogany table, ne comfortable old fiddleback chairs, and the entire implicity of the decoration and furnishing of the oom, offer a lesson in the dignity and comfort of uiet good taste which is in striking contrast with ome other offices where elaborate efforts have been ade to design fine rooms for the effect on clients. he walls are panelled in oak with a soft greyish nish, the ceiling is tinted, and the floor inside the trian marble border and base is covered with a ain rug woven to tone with the oak wainscot.

The series of private offices are decorated to armonise with the main reception room—the eilings tinted and the walls covered with "woven aper." Mahogany furniture and soft cork tile oors complete the effect of the sort of plain luxury hich is consistent with the term "office," as we dinarily interpret it.

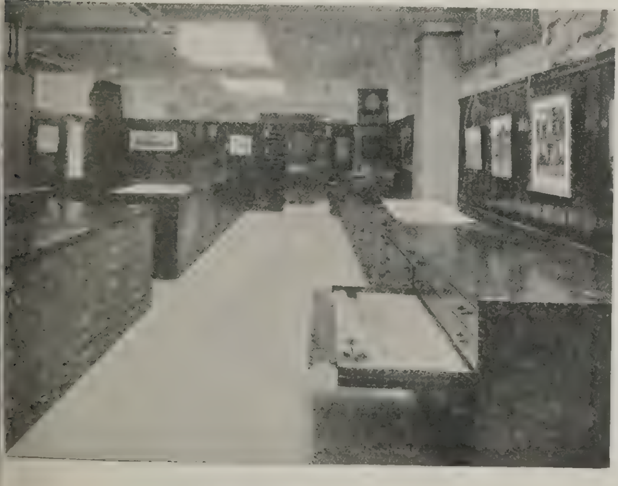
The curious visitor walks on through the office and notes the fine "working" library invitingly accessible from the drafting room; the drawing files, which are alcoves with sets of drawings of current work bound between wood strips and hung from books; closets for storage of boards and table tops; a supply room from which even paper is issued from behind lock and key to prevent careless waste.

The drafting room has ceiling and frieze tinted white down to the grey picture mould, and the soft tan-coloured wall is reflected in the composition floor which resembles linoleum. The firm recognises the fact that an architect's office is a hazardous fire risk, and so forbids smoking in the drafting room.

The specification room has an interesting device. On each of three sides of the room there are hung from the ceiling two curtains of strong muslin as large as the side of the room will allow. One is hung some three inches in front of the other, and, being on spring rollers, they can be run up and down at will to display pinned to their surface a whole series of drawings. For one large building the lower halves of all six curtains could be used at once. The specification writer can walk around the room with his eyes on the drawings, dictating specifications to his stenographer. The expert, who has done the work for the firm for many years, has no need for reminders or card forms, though he occasionally follows a specification which he has written previously for a similar building. But he has one convenient memorandum in the form of a single sheet of blank paper, perhaps 24 inches wide, ruled in vertical columns, headed by "Mason," "Carpenter," "Structural Steel," "Ornamental Iron," etc., one column for each trade. If he happens to be dictating specifications for mason work, he jots down in any of the other columns special items which need to be covered later in writing the other respective specifications. The single large sheet saves time which we all have wasted turning leaves to place a note aright.

The specialist in specification writing may spend two or three days first of all in studying a set of drawings and getting instructions in the forms of answers to a series of questions. After dictation, a preliminary typewritten draft of specification is read over by a member of the firm and corrected for the final writing.

The writing of specifications for heating, electrical, and sanitary work is allotted to specialists outside the office. The same remark is true of



Filing and Contractors' Room.

Main Draughting Room.

OFFICES OF MESSRS. McKIM, MEAD, AND WHITE, NEW YORK.

structural engineering. Both specifications and framing plans are made by engineers in their own offices.

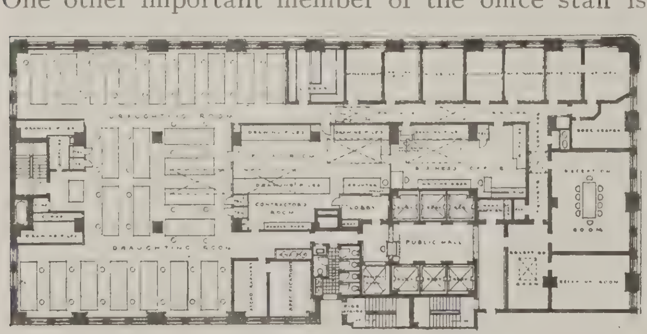
The so-called "filing room" contains under the extensive polished mahogany-birch counter tops steel cabinets of very large drawers in which are kept "flat" tracings, etc. Old drawings are transferred to a room in another story of the building big enough to engulf the entire office of the average architect. Here in tubes (though all filing would be flat if started anew) are the accumulations of years, not including thousands of drawings which it was considered could safely be destroyed.

Returning now to the "Business Office," the interviewer is shown the card-index, through which can be found the location in the files of all drawings. When new drawings are made, one card 6 inches by 4 inches is provided for each, on which the issue and receipt of all prints of that drawing are entered. This involves a large amount of clerical labour, as one can imagine when he sees a whole drawer full of cards for one building alone such as the New York City Post Office.

Incoming mails are opened by the chief clerk in the business office, and letters sent by him to the several members of the firm. This leads us to the method of administration of the office. There is no chief draftsman, and, previous to the time of the Pennsylvania station, the firm never had a general superintendent. Each building on the boards is assigned to one of the five members of the firm. He is responsible for that piece of work throughout. He directs the draftsman in charge of that particular building, visés the working drawings before issue, deals with the client, and receives reports from the draftsman or superintendent who supervises the building. One of the secrets of the success of the firm is perhaps individual responsibility; the draftsman in charge of a particular piece of work is expected to follow it through to the completion of the building, keeping in touch even when there is, as at present, a general superintendent in charge of construction. The responsible draftsman may even conduct correspondence, always sending carbon copies of his letters to the desk of the member of the firm interested. That method has certainly been the means of giving an all-round training to many a successful architect who has swarmed, as it were, from this busy hive.

The general superintendent, it may be observed here, spends half his time in the office and half out. He keeps tab on the weekly reports of the several assistant superintendents and also gets verbal reports from them or the clerk of the works on the job, and takes care of extras and changes.

The general superintendent and the expert specification writer have been mentioned. The veteran accountant who is skilled in drawing contracts carries unusual responsibilities in keeping tab on estimates, extras, orders, and certificates, aside from all the office accounts, which include a notable system of keeping office costs on each building. One other important member of the office staff is an experienced estimator, who has had training in a contractor's office. He is engaged in making carefully detailed estimates to arrive at the total cost of prospective buildings while designs are in preliminary stages. He is also kept busy checking up contractors' estimates for extras and deductions on work under construction.



OFFICES OF MESSRS. McKIM, MEAD, AND WHITE, NEW YORK: PLAN.

For this description, and the accompanying illustrations, we are indebted to the December issue of "The Brickbuilder."

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or opinion expressed by correspondents, who are asked to be brief, and to write on one sid only of the paper.

Competition for the New Board of Trade Offices.

To the Editors of THE ARCHITECTS' AND BUILDERS JOURNAL.

SIRS,—Now that the date has passed for sending in the designs in the first competition for this building, I should like to draw attention to what, to my mind, are unsatisfactory features in the instructions issued to architects, in the hope that it may prevent their being made a precedent for the future

The fact that the names of three well-known and distinguished architects—one since, unfortunately dead—appeared in the particulars as assessors makes this all the more important.

In the first place, the site is by no means an idea one for a large public building, having no two sides parallel and none of its angles right angles. I make no complaint about this, but merely state the fact to show that the problem to be solved was not an easy one.

The building is to be carried out in two portions the first occupying the site of certain old houses in Whitehall Gardens, which are to be pulled down and the second the site of the present Board o Trade Offices. The first portion is to be proceeded with at once, and the second at some future time not specified.

The schedule of accommodation to be provided i the first portion is given more or less in detail; tha is to say, the number of rooms in each departmen and their area are set out in full, but not the uses t which they are to be put or the names of the variou departments, which are merely distinguished by letters A, B, C, etc.

In the second portion, however, all the information which is vouchsafed is that "competitors may assume that the arrangements would follow generally those of the first portion." So that for building the second portion of which on their own computation is to cost some £290,000, the promoters expect architects to be able to prepare plans on such meagre instructions as this! Surely this is a species of architectural "blind man' buff."

The questions (over a hundred in number) asked by competitors showed that considerable doub existed in their minds as to the precise meaning o some of the instructions, and many of them wer directed to trying to get some more detailed information about the uses to which the second portion of the buildings were to be put, but withou success.

Clause 20 of the instructions states that "th object of the first competition being to obtain good general scheme, only so much as is necessary to illustrate it need be given in the plans."

That sounds a most excellent idea, and in pursuance of it clause 14 states that in the first competition plans of the ground and principal floors only are required, and "diagram plans" showing the accommodation to be placed on the remaining floors.

Seeing that the building is to consist of nine floors above ground and two floors below it, making eleven floors in all, that sounds no small concession to the competitors. But how is it interpreted?

The expression "diagram plans" is a somewhat vague one, and several of the competitors asked questions to try and elucidate exactly what was meant by it. One asked if these plans might be to a smaller scale, and if single line diagrams would be sufficient, and was told no. Another asked if it would be sufficient to show the departments only on these floors, or whether all the rooms must be shown also, and was told that all the rooms must be shown.

How then do "diagram plans" differ from ordinary plans, if they are to be to the same scale and show all the rooms in every department on that floor?

Then, again, with the exception of the rooms for the president and high officials on the principal floor, no information is given as to who the various officials are who will occupy the rooms in the different departments, or any idea as to the nature of their occupations. Surely it is important that an architect should have some idea as to the use to which the various rooms are to be put: whether they are to be used for inspectors, clerks, typists, draughtsmen, or store rooms.

Department G2 or K3 may be perfectly intelligible to the distinguished members of the Civil Service, who are employed in those departments, but to a mere architect they mean nothing. Some of the competitors who asked for further information on this subject received the curt reply, "Further information cannot be given."

Where the conditions of this competition are to my mind so unsatisfactory is that they either give you too much information or too little.

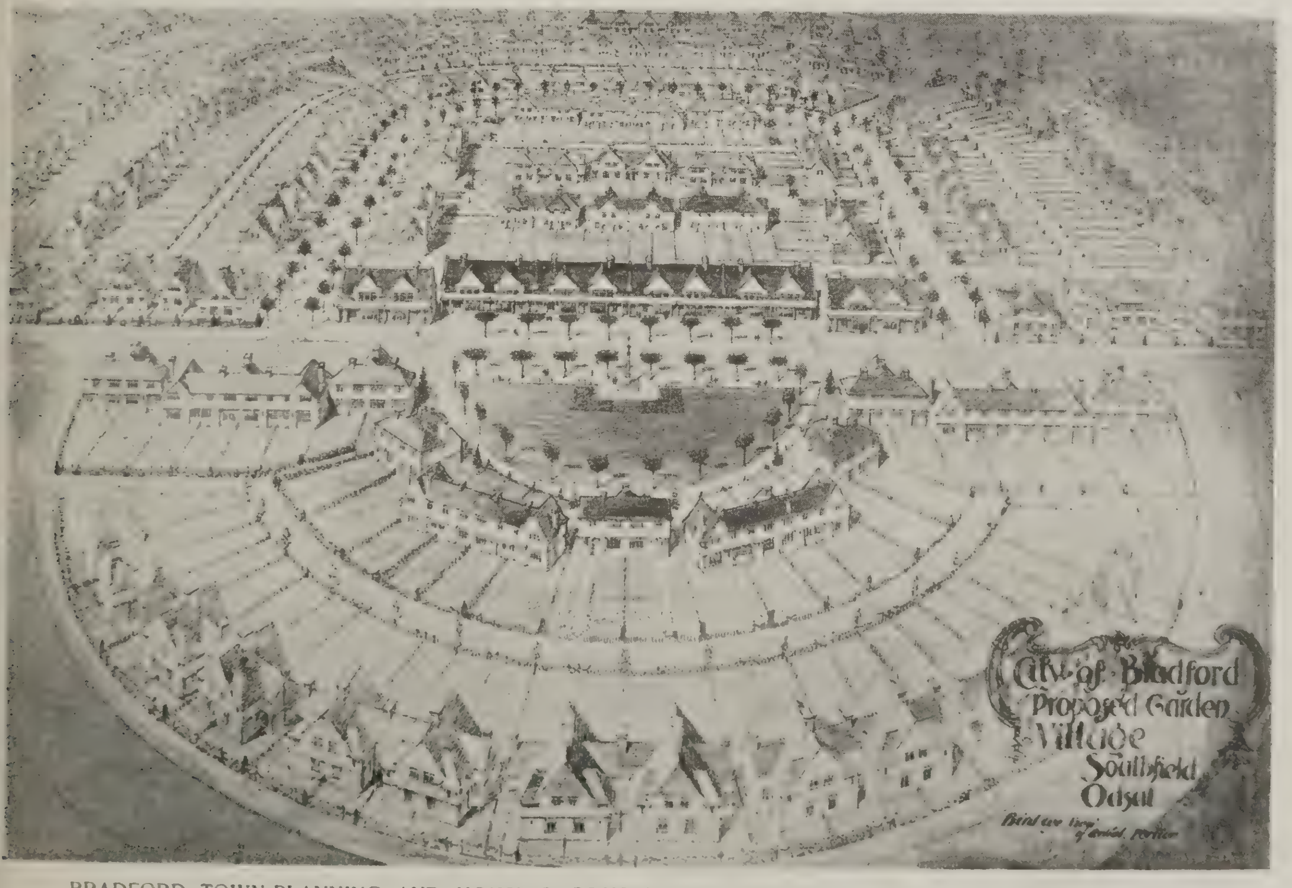
If all that was wanted was a good general scheme, as the instructions stated, why bind one down to rigid conditions which defined not only the area and position of each department, but even the exact number of rooms and the area of each room in that department? If, on the other hand, a complete plan showing the exact disposition of every part of the building was required, why not give the competitors the information necessary to provide it? That information the instructions issued to architects did not provide, and for that reason I, after spending a certain amount of time on it, threw the whole thing up in disgust.

It has been said that "in the multitude of counsellors there is wisdom." But of course one does not know to what extent the three assessors may have been consulted in the preparation of the instructions.

An Intending Competitor.

BRADFORD TOWN-PLANNING AND HOUSING COMPETITION.

In our issue of December 17th, 1913, we illustrated the three premiated designs in the Bradford Town-Planning and Housing Competition, in which, it will be remembered, premiums of £300, £200, and £100 were awarded in accordance with the advice of the assessor, Mr. Henry T. Hare, F.R.I.B.A. Mr. H. S. East, A.R.I.B.A., whose design was placed first, writes to point out that the writer of the criticism that accompanied those designs was in error in assuming that "the winning design, for example, shows no trees on any of the streets." Mr. East himself supplies the explanation of the error when he states that, "in order to avoid a confused-looking block plan, no trees were shown on it except in the open spaces." He further suggests that, in order to show the true state of the case, we should show also his perspective view. We very willingly comply. The accompanying perspective will serve to correct any impression given by the block plan that a treeless suburb was intended.



BRADFORD TOWN-PLANNING AND HOUSING COMPETITION: BIRD'S-EYE VIEW OF CENTRAL PORTION.

FIRST-PREMIATED DESIGN. H. S. EAST, A.R.I.B.A., ARCHITECT.

THE NINETEENTH CENTURY.*

THE CLIMAX OF CLASSIC ARCHITECTURE IN THE NEO-GREC AND ITALIAN PHASE.

BY A. E. RICHARDSON.

THE nineteenth-century spirit in England began with the reign of William IV. and closed with the death of Queen Victoria. Its cycle records one vast assemblage of divergent triumphs, each of immense importance, not only to England, but to the whole of the civilised world. Only a short decade separates us from the Victorian epoch; we have scarcely traversed a sufficient distance fully to comprehend the meaning of that age, yet at the present time a complete change in the attitude of society is apparent both as regards thought and taste. It needs temerity to discuss events which are common knowledge, but the deluge of facts and their enmeshment provides the excuse for the unravelling of data inseparable from the circle of architecture. We can afford to skip over the vast political changes which were the product of the early years of the last century to consider corresponding movements in the respective spheres of Art, Science, and Commerce. Almost immediately the true secret of the unparalleled prosperity of that day is revealed. We sympathise with the inventions of an age scarcely seventy years removed; England is about to be knit with webs of iron. Travel is to be brought within the reach of all; machines of every description are to be conjured into existence by wizards whose minds worked in terms of steel. The railway mania is to possess the country, mad schemes are projected, fortunes gained and lost in a few days. The flame of the industrial age ascends, leaps, and expands; vast populations rise and fasten on the centres of industry, bringing with their multitudes all the sociological problems which are the legacy of the modern politician. Presently we shall see how this affected the development of architecture.

The Growth of Railway Practice.

The Classic spirit common to the courtly eighteenth century ushered buildings into existence mainly conspicuous for their idealistic beauty: those of the nineteenth century were mainly accounted for by questions of practical utility, but such was the reverence paid to the volume of earlier models that the underlying principles of the established tradition were extended with surety of judgment. The changed conditions demanded from both the architects and engineers a breadth of outlook which was scarcely appreciated; there were, however exceptions to the general rule, and this in spite of the tendency in some quarters to forge steel in semblance of stone. About the year 1840 railway practice came into prominence and was seriously discussed from an architectural standpoint, and in the year 1844 came the mania for speculation already referred to. It provided more substantial results, however, than the ephemeral South Sea speculations of the early eighteenth century.

Sir John Rennie writes: "Engineering was considered to be the only profession where immense wealth and fame were to be acquired, and, consequently, everybody became engineers." About this time many architects took up railway practice, and some of the finest bridges and railway stations in the country were erected. So great, in fact, was the fame acquired by British architects and engineers at this juncture that their services were speedily in demand in all parts of Europe and America.

The development of the railways, conducted in feverish haste, furthered the spread of industrialism and resulted in the abnormal extension of the manufacturing centres in the North of England and along the valleys of the Clyde and Forth. The facial expression for railway structures was almost without exception consistently Classic; if we examine such fine stations as those at Euston, Newcastle, Huddersfield, or Dublin, or the tunnel façades of Primrose Hill, the North Welwyn, Box, and many others in Lancashire and Yorkshire, the variety and appropriate character of each will provide sufficient evidence. By 1840 Robert Stephenson had completed the London and Birmingham Railway; Hardwick's monument to railway enterprise at Euston was finished in 1838: the extension to Liverpool was in hand, and the branch to Holyhead with the bridging of the Menai Straits was projected. Isambard Brunel, although busy with his Thames boring, found time to carry the broad gauge to Plymouth, to span the Tamar at Saltash, and bridge the Gorge at Clifton. The railway system in Ireland was also seriously considered; one scheme running from Dublin to Galway due west embodied the making of a great Atlantic port for mails and passengers. This scheme, now the Midland and Great Western of Ireland, brought the architect Mulvaney into prominence; he designed the superb terminus in Dublin called Broadstone and built the stations throughout the line as well as the terminus and hotel at the western extremity. The idea of an Atlantic port has yet to be realised; the jealousy of the Liverpool shipmasters at the time proved a bar to its assured success. Pugin, righteous Goth, indignantly furious with the increasing number of Pagan temples dedicated to Vulcan, published his ridiculous contrasts and depicted the joys of railway travel in mediæval garb. An echo of this curious outburst occurred in 1870, when Sir Gilbert Scott, for St. Pancras Station, followed the lead of Sir Charles Barry and bedizened a building Classic in plan and form with Gothic jewellery. Further evidence of the mechanical tendencies of the age can be found in a study of the dress of the period—the peaked cap and the pea jacket. Cheek by jowl with the reserved Classic tradition, the revived Gothic trailed its way through fifty years of the nineteenth century, forced by the very exigencies of the times to veil thinly its obvious Classic body with a diaphanous gown of mediæval texture, which in the progress of years wore to shreds.

Industrialism and the "Battle of the Styles."

I have previously mentioned that the Classic tradition was shorn of its domestic aspect at the close of the Regency, but in its rightest forms it remained unassailable. The formality associated with the ranges of eighteenth-century terrace houses still provided the theme for compositions of similar extent, but the brutalising needs of an industrial population finally extinguished the subtle, nay, almost aristocratic, character common to even the humbler dwellings of the courtly age. Miles of coarsened buildings sprang up with the persistency of obnoxious weeds. These in turn were succeeded by further travesties of taste, and are, without doubt, the direct ancestors of the lowest type of speculative houses, which represent the expansion of English suburban districts during the last quarter of a century.

The prosperous cotton spinners of Oldham, Blackburn, and Manchester, the shipmasters and merchants of Liverpool, the master potters of the Five Towns, followed the railroad to Bournemouth and found blissful sanctuary beneath the roofs of pseudo-Gothic villas. Others less fortunate were content to hide from the ghastly labyrinth of their own creation nearer at hand, hence the thousands of nameless structures disfiguring the western hills of Derbyshire and the coast villages of North Wales. England, the history of thy commercial success is deep-scarred in the country side!

The foregoing historical setting, fragmentary as it is, serves the dual purpose of throwing into more vivid relief the masterpieces of the neo-Classic tradition which soared above such rude changes, and at the same time forcibly demonstrates the persistency of the artists who interpreted conditions described by Professor Donaldson as "chaotic."

The strictly utilitarian nineteenth century had, however, its mawkish sentimental side, which belonged to the Middle Period. It wept tears of sympathy at the past inconveniences of mediæval life, but strove to emulate the very things it despised. The smug conceit of the age blinded it to its own brilliant possibilities, the long peace following the battle of Waterloo matured in a prosperity best described as over-ripe. Groups of artists arose who owed allegiance to no particular school and as quickly left the stage. The grave commissioners of ecclesiastical art claimed a sweeping victory, but in their hour of supposed triumph lost one of their foremost men by the forced secession of Sir Gilbert Scott. The battle of the styles was terminated by a Goth designing a fine Classic building for the Treasury. The Classic tradition was put to a severe test, but maintained its well-being down to a more recent period than is commonly supposed. From this point we must consider the reverse of the medal and devote our attention solely to the finer chasing and more poignant inscription presented.

Classic School Activities.

Before the Greek phase had completely run its course a marked change of opinion was expressed in those architectural circles devoted to a furtherance of the Classic spirit. Several outside forces were also at work. The French and German archæologists were running the Classic mines at full pressure; investigations of Roman architecture were again in progress. The activities of Canina, of Blouet and of Cockerell, Donaldson and Penrose in the sphere of research, as well as the continued publications of the Society of Dilletanti, and at a later date the Hellenic Society, played no small part in the shaping of current architectural policy. It was enunciated by those who led the mass of opinion that something more was required in architectural design than mere authority for certain features of a building. The shackles of convention hitherto worn so rigidly were proving too irksome. The exponents of Classic architecture were unwilling entirely to dissociate themselves from the Greek forms, but they were becoming just as much enamoured of the talian. In addition to this widening view, he fame of the German architects, Karl Schinkel and Leo von Klenze, was of too much importance to be overlooked. The pirit of creative art was in the ascendant; ts strong voice ringing in Paris was heard by the coteries in London. The message was clear. It ran: " From the old Roman nd the old Italian learn a lesson, blend he truths of each with the finesse of Greek art, and ever keep in mind the meaning of he modern age." Almost simultaneously response was made by Cockerell, Barry, nd Elmes; others joined the group, and he tradition blazed to great refulgence. Not only did the peculiar attitude of the public towards architecture at that day materially aid the spirit of the movement, ut the cultured artists were sufficiently removed from the canons of the eighteenth entury to view the contrast of light and hade with more exactitude. At the early meetings of the Royal Institute of British Architects papers were read by eminent men on the life of Sir Christopher Wren, memoirs of the eighteenth century giants ere written and discussed, and the theory of the Palladian principles of proportion as once more brought forward. Cockerell, hose knowledge of Greek detail and talian composition was profound, carried he matured Classic back to meet the odels of the early vernacular tradition, hile Barry, eager for Italian adventure, dopted the Palazzo model as part of his rchitectural theory. At the time few critics ere in a position to read that which to-ay is clearly apparent; scarcely a hand-l realised that enormous results could e obtained by following the teachings of rofessor Cockerell. Even Barry's pre-lection for astylar buildings evoked much censure as admiration, but the plendid results justified the adaptation. eanwhile Cockerell delivered his series of rilliant lectures at the Royal Academy, owing the trend of his cultured ambitions a way that his completed buildings only guely hint at. Even when he was forced lecture on mediæval architecture he aintained a perfect balance between fact d theory, and constantly kept the picture modern conditions before his audience. ne of the professor's lectures contained e following terse remark: " Gentlemen, ere is yet another order, it is the order of n." But the mine of the nineteenth ntury had yet to be sprung when Harvey nsdale Elmes, then little more than a uth, appeared on the scene as the author the winning design for St. George's ll at Liverpool. Eight years after, the ilding was on a fair way to completion, t the talented architect never saw his sterpiece.

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* The ninth of a series of Lectures on "The Work of the English Architects of the Eighteenth Century and the Neo-Classic School of the Nineteenth Century," given at University College, Gower Street.

Celebrated Exponents of Classicism.

We could spend many evenings discus g the careers of other celebrated expo-nts of the Classic School—their names legion; to recite the facts of their exist-ce would take all our attention and we ould have all text and no sermon. The ef among them, however, must receive nsideration. Pennethorne, a nephew of sh and successor to his practice, became hitect to the Crown and carried out important additions to Buckingham Palace, the Duchy of Cornwall Office, and the University of London in Burlington Gardens; Basevi works in partnership with Sidney Smirke; Sir William Tite favours the Italian mode; Walters and Cregan at Manchester continue the Italian vernacular; John Gibson, the pupil of Sir Charles Barry, designs Italian banks in London and in provincial centres; Professor Hoskings introduces the Manchester warehouse into St. Paul's Churchyard and Cannon Street, while Donaldson lectures at University College. In Scotland Alexander Thomson endeavours to create an individual style by blending the Egyptian with the Hellenic motif; by sheer genius he at times reached the academic platform, although his work has little in common with the more reticent works of the tradition. Frederick Pepys Cockerell, the talented son of the professor, designs the Freemasons' Tavern in Great Queen Street. In principle this building follows the buildings designed by the father, but the detail mirrors the complex richness of the age. From the year 1870 onwards the Italian vernacular is generally followed. The Royal Albert Hall at Kensington, with the Museum and Science and Art buildings, designed by Captain Fowke and an architectural staff, show the possibilities of brick and terra-cotta applied to buildings of great size. Although at this period the majority of the buildings purporting to be Classic were feeble in expression, through the medium of the finer examples the thread of the tradition was continued.

Later Developments.

After the year 1870 and almost concurring with the rise of Nesfield and Shaw, a wonderful aftermath ensued, a later growth of Classic architecture, which connects the main issues of the tradition with the phenomenal developments taking place to-day. A study of the works of Bellamy of the late Edward I'Anson, and those of James Hibbert, of Preston, will make the point clearer. If further evidence is required, the series of Government buildings such as the post-offices designed by James Williams in London and Manchester proves the virility of the neo-Classic; we are forced by such evidence to refuse to acknowledge the provincialities of the last twenty-five years. We are tardily beginning to acknowledge that the Victorian age, which produced such literary giants as Thackeray, Carlyle, Tennyson, and Matthew Arnold, and which gave Turner to the world, also witnessed triumphs of architectural genius. I have still a few notes to add concerning events of more recent import. The tentative experiments of Norman Shaw and Eden Nesfield were in reality a return to the earlier seventeenth century phrases of the tradition. Norman Shaw endeavoured by sheer strength of personality to blunder through to academic Classic, but he made the attempt too late in life. The work of the late Mr. John Belcher, especially the noble frontage of Electra House, shows a finer grasp of the academic theory. The public competitions for the buildings in Whitehall and for various municipal bodies throughout the Kingdom, which are among the events of the past fifteen years, have produced nothing more than hybrid Classic, which in turn perniciously reacted on the vernacular. Picturesque Dutch, Flemish, French and Spanish importations have been experimented with only to die prematurely. In addition, we have experienced during the past thirty years the phenomenal rise of the Domestic School, characterised at one stage with faulty renderings of provincial Classic and at another period with an excess of picturesque motif. And only now, at the beginning of the twentieth century, do we realise that the finer expressions of civil architecture have still to be attained if competition with the achievement of the past is desired.

A Synopsis of the Lives of the Prominent Architects.

Professor Charles Robert Cockerell, R.A., 1788-1863, was the second son of Samuel Pepys Cockerell. After some years in his father's office he became confidential assistant to Sir Robert Smirke, at that time enjoying one of the largest practices in London, and assisted in the rebuilding of Covent Garden Theatre. In April, 1810, following the system of architectural education of the day, he left for Greece. After five years' continued travel he journeyed to Italy, travelling with Linckh as companion; he reached Rome in July of that year. While in Italy Cockerell attempted architectural designs, but he experienced the greatest difficulty in making his plans presentable. This was the occasion of a letter to his father asking permission to give up the pursuit of architecture. The outcome of this request was a further period of study in Italy, which proved to be the making of the young architect's career. After several years' absence from England, Cockerell reached England via Paris in 1817. At the age of twenty-nine he entered into active practice as an architect. His immense knowledge of Classic art secured for him instant acknowledgment, for he brought from abroad a great reputation as a scholar. The following are among his chief works:—

1813.—The Literary and Philosophical Institution at Bristol.

1820.—32, St. James's Square. Details.

1822.—Design for a private chapel for Lord and Lady Middleton.

1823.—Hanover Chapel, Regent Street. (This design was inspired by a study of Wren's Church of St. Stephen's, Walbrook.)

1829-33.—Trinity Church, Hotwells, Bristol. Associated with Playfair, he designed the Scottish National Memorial on the Calton Hill of Edinburgh.

1832.—Appointed architect to the Bank of England. The Westminster Insurance Office. This design was the first of a series of pedimental motifs he afterwards developed for the branches of the Bank of England.

1834.—Began the University Library at Cambridge.

1837.—Collaborated with Sir William Tite for the erection of the London and Westminster Bank, Lothbury. (The exterior by Cockerell, the interior chiefly by Tite.)

1838.—Competition for the Royal Exchange.

1841.—The Sun Fire Office.

1844.—Branches of the Bank of England at Plymouth, Manchester, and Bristol.

1845.—The branch at Liverpool. Completed the Taylor and Randolph Buildings at Oxford.

1848.—Alterations at the Bank of England, including the attic story which unifies the Threadneedle Street front. Completed the Fitzwilliam Museum after the death of Basevi. Completed St. George's Hall after the death of Elmes. Cockerell took part in many of the important competitions of the day, and in at least six was successful. All Cockerell's later works were of such importance that it is difficult to give preference to any particular building as being his masterpiece.

George Basevi (1794-1845) was a pupil of Sir John Soane. His earliest works were two churches—St. Mary's, Greenwich, and St. Thomas's at Stockport. Others were:—

1825-40.—Belgrave Square and district.

1834.—Middlesex Hospital, remodelled. Fitzwilliam Museum at Cambridge.

1843.—The Conservative Club, with Sidney Smirke.

Basevi met his death while making a hasty inspection of the Bell Tower at Ely.

Sidney Smirke (1790-1877). Works:—

1834.—Remodelled the Pantheon, Oxford Street.

1847-54.—Carlton Club, Pall Mall. Circular reading room to the British Museum.

1867-70.—The new galleries at the Royal Academy.

Harvey Lonsdale Elmes (1814-47) was the son of James Elmes.

1835.—Entered the office of Goodridge, of Bath.

1839.—Entered the competition for St. George's Hall, which he won.

1840.—Obtained the first premium for the Assize Courts at Liverpool. After a visit to Germany and a study of the work of Schinkel and Klenze, Elmes submitted a design embodying the two previous schemes into one, which obtained the approval of the committee.

1841.—St. George's Hall commenced.

1847.—Left for Jamaica, where he died at the early age of thirty-three. Elmes's other works comprise several buildings in Liverpool and the façade of the terrace opposite Albert Gate, Hyde Park.

Sir Charles Barry (1795-1860). Started in 1817 on his foreign travels, returning to England in 1820.

1822.—Began practice.

1824.—The Royal Institute of Fine Arts at Manchester.

1825.—Sussex County Hospital, Brighton.

1829-32.—The Travellers' Club, Pall Mall.

1833-37.—Extensive alterations to the College of Surgeons in 1850. The panelled wall at the back and other alterations and additions.

1836.—The Athenæum Club at Manchester.

1837.—The Reform Club.

1841.—Pentonville Prison.

1844.—Remodelled the Board of Trade Offices in Whitehall, previously designed by Soane.

1850.—Bridgwater House, Cliefden Row.

1851.—Chefton House alterations.

1857.—Prepared his concentration scheme for all the Government offices.

1860.—Halifax Town Hall.

The Houses of Parliament must be considered his masterpiece; the plan is Classic, the Gothic dressing by Pugin lending but little to the grandeur of Barry's immortal composition.

Philip Hardwick. Works:—

1825.—The dock houses and warehouses at St. Katharine's Dock.

1836.—The Goldsmiths' Hall, Foster Lane. The Great Western Hotel at Paddington, the City Club, and other works. He was assisted by his son P. C. Hardwick.

1837-48.—Built Euston Station, tunnels on the London and Birmingham Railway, and the terminus at Birmingham.

Frederick Pepys Cockerell (1833-1878) was the second son of Professor Cockerell. The Freemasons' Tavern is his chief work.

Sir William Tite will be best remembered by the Royal Exchange.

Sir James Pennethorne (1801-1871) was the nephew and pupil of John Nash. Works:—

1837.—The Museum of Practical Geology in Jermyn Street.

1851.—The Ordnance Office, Pall Mall.

1852.—The extension to Somerset House.

1854.—Office of the Duchy of Cornwall and various additions to Buckingham Palace.

1866-70.—The London University Buildings in Burlington Gardens.

Need for a National School of Architecture.

No theory is so stultifying to architectural development as that which implies that buildings can only be recognised as good architecture many years after their authors are dead. Such is the excuse voiced against a study of the more recent works of the nineteenth century, but no greater fallacy could be cited. English architects, it is true, are deficient in imagination regarding the planning of great civic conceptions, but the wealth of invention displayed in the composition of civic buildings shows that as a nation we have plenty of material to mould into shape.

The prevailing tendency in some architectural circles is to elevate the provincial spirit and to mistake heaps of littlenesses for monuments of eternal glory. There is apparent a lamentable lack of policy at the Royal Academy Schools; no really great training institution, such as a first-class Power should possess, is in existence, and methods of academic training are undertaken in a haphazard manner. It is an important fact that the majority of the universities are working to improve the existing order of things, but until a National School of Architecture is called into being a critical tribunal is an impossibility.

My concluding lecture will treat of the English tradition in America and the future of Classic architecture in England.

BOOK NOTICES.

Structural Economy.

Practice in any craft or industry is so strongly influenced by tradition, and so strictly governed by prescription, that it must inevitably tend to get out of date. Innovation is always looked at askance, its promise of improvement being usually outweighed by the greater assurance of safety associated with the method that has survived the test of experience; and it is for no better reason that we cling tenaciously to ways and means that have been handed down to us for generations, but might be very advantageously superseded. Progress is no doubt greatly hindered by the general timorousness and the unquestioning acceptance of the paralysing dogma that whatever is is right; of which the converse, one is sometimes disposed to think, might be rather more capable of proof.

Mr. E. A. Slater, in an interesting treatise on "Structural Economy," offers many alternatives to accepted methods, and most of these are worked out so clearly as to bring conviction that considerable advantage must accrue from their adoption. Many of his contentions he proves
to demonstration by means either of calcu
lations or of diagrams, the book bein
illustrated with more than a hundre
sketches or diagrams. He shows improve
practice in almost every department, fron
foundation to roof, the old way and th
new being in every instance compared i
sufficiently full detail to show on whic
side the higher economy lies. He ha
produced a most suggestive book, and on
that architects may study with consider
able profit, for there is much in it tha
deserves close attention. If it does no
induce them to modify very drasticall
their specifications it will neverthele
convince them of the desirability of scru
tinising more narrowly a number of point
that they may have fallen into the indo
lent habit of taking for granted. It make
for genuine economy in the highest sens
—not the short-sighted immediate savin
in cost which proves in the upshot illu
sory, but the ultimate issues that procee
from the wiser regard for fitness, sound
ness, and efficiency.

"Structural Economy." By E. A. Slater, A M.I.C.E
F.S.I., etc. London: St. Bride's Press, 24, Bri
Lane, Fleet Street, E.C. Pages xi. + 144, 10 ins.
7½ ins.

The Garden City.

In this intimate account of the rise an
progress of Letchworth Garden City, M
Purdom explores the whole philosophy
Garden City building. Except, perhap
to those who live within its boundarie
Letchworth, or any other garden city,
mainly interesting as a revolt against th
bad planning and worse building of tow
that accompanied the industrial throes
the last century; the author of this boo
deals in detail with the circumstances
this pioneer revolt. It is true that in pra
tice Letchworth does not fully realise t
idealistic aims of its principal promote
Mr. Ebenezer Howard, more particular
in regard to his belief that the State shou
carry out the scheme; but it is equal
true that the garden city has succeede
very well as a private undertaking on le
idealistic lines. As Mr. Purdom contend
Letchworth in practice is "more human
than the institution which Mr. Howa
conceived in theory. And one may ad
incidentally, that the people who live the
are both more human and more ordina
than has sometimes been supposed.
regard to the making of the town, M
Purdom makes it clear that the curre
ideas of town-planning are inapplicab
to a garden city when the ostensible o
ject is to retain as far as possible the rur
characteristics of the site. The Letc
worth Company did not fail to realise th
truth; but they were over-successful
holding a "Cheap Cottages Exhibition
inasmuch as the cheap cottages we
taken seriously by the public and the
models insisted on for permanent dwel
ings. Many well-known architects of t
day have worked at Letchworth: we nee
only cite Messrs. Parker and Unwin, M
Baillie Scott, Mr. Halsey Ricardo, a
Mr. Geoffry Lucas; and much excelle
domestic work has been produced her
That it is uniformly excellent may be d
to the growth of the industrial element
the town, bringing with it a wholeso
demand for practical planning. M
Purdom examines every phase of l
at Letchworth, and both text and appe
dices are thoroughly readable. The latt
include a paper on the planning of t
city by Mr. Raymond Unwin.

"The Garden City." By C. B. Purdom With f
coloured plates by T. Friedenson, and numero
photographic illustrations. London: J. M. Dent
Sons, 10s. 6d. net.

A PUBLIC INSTITUTION LAUNDRY.

SPECIALLY CONTRIBUTED BY ANDREW LOUDON.

IN the great hospitals, infirmaries, asylums, and poorhouses with which our country abounds, there is no more important unit than the laundry, a fact which will at once be realised when it is stated that in a hospital of moderate capacity the number of pieces of linen to be washed, dried, and ironed in one week is, roughly speaking, from twenty to twenty-five thousand. To cope with such a vast quantity of linen a very large and effective installation of machinery is necessary.

As an example of an institution laundry on modern lines, and one that is worthy of study by architects and others upon whom the lay-out and equipment of such institutions devolve, we describe here the installation of the principal laundry machines at St. John's Road Workhouse, Upper Holloway, London, which was overhauled and brought up to date a year ago.

In this institution there is accommodation for 1,930 pauper inmates, and the approximate number of pieces put through the laundry in one week is 40,000. The processes carried out in the various departments comprising the laundry unit are almost entirely mechanical. There are a few hand washing tubs and steeping tanks in the washhouse, but these are only employed on special fabrics such as woollens, the great bulk of the bed-linen and clothing being washed, dried, and ironed by machinery.

Power.

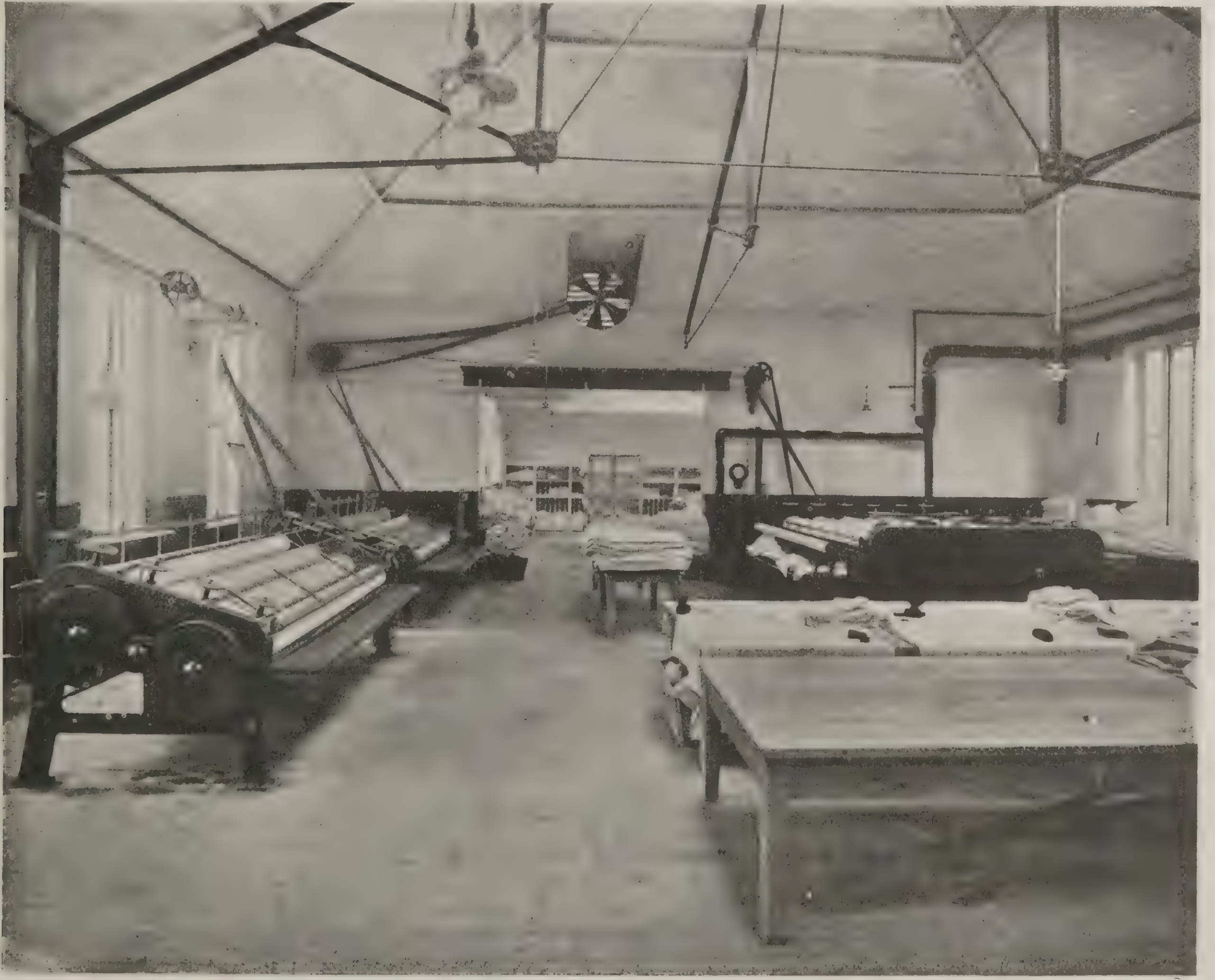
The steam supply for the laundry is drawn from the central power station, where are situated the large boilers for generating steam to heat the various buildings and for kitchen and laundry supply. The main supply pipe to the laundry is 3½ in. in diameter. From it are taken lesser mains and branches to all machines and appliances where steam is employed. The approximate consumption of steam in the laundry for washing machines, drying machine, calendering machines, wash-tubs, and other appliances, is approximately 2,400 lb. per hour, representing about 3 cwt. of coal.

The driving power in the laundry is obtained from a large steam engine of horizontal type, with steam cylinder 13 in. in diameter by 16 in. stroke, developing 32½ maximum b.h.p., with a steam pressure of 60 lb. to the square inch. The main driving belt from this engine connects up a line of shafting 2¼ in. diameter, from which belt drives are taken to the pulleys on the various machines. The engine is of ample power to drive the whole plant under the most economical conditions as regards steam consumption, and has sufficient reserve power to drive additional machines should these be required in the laundry at a later date.

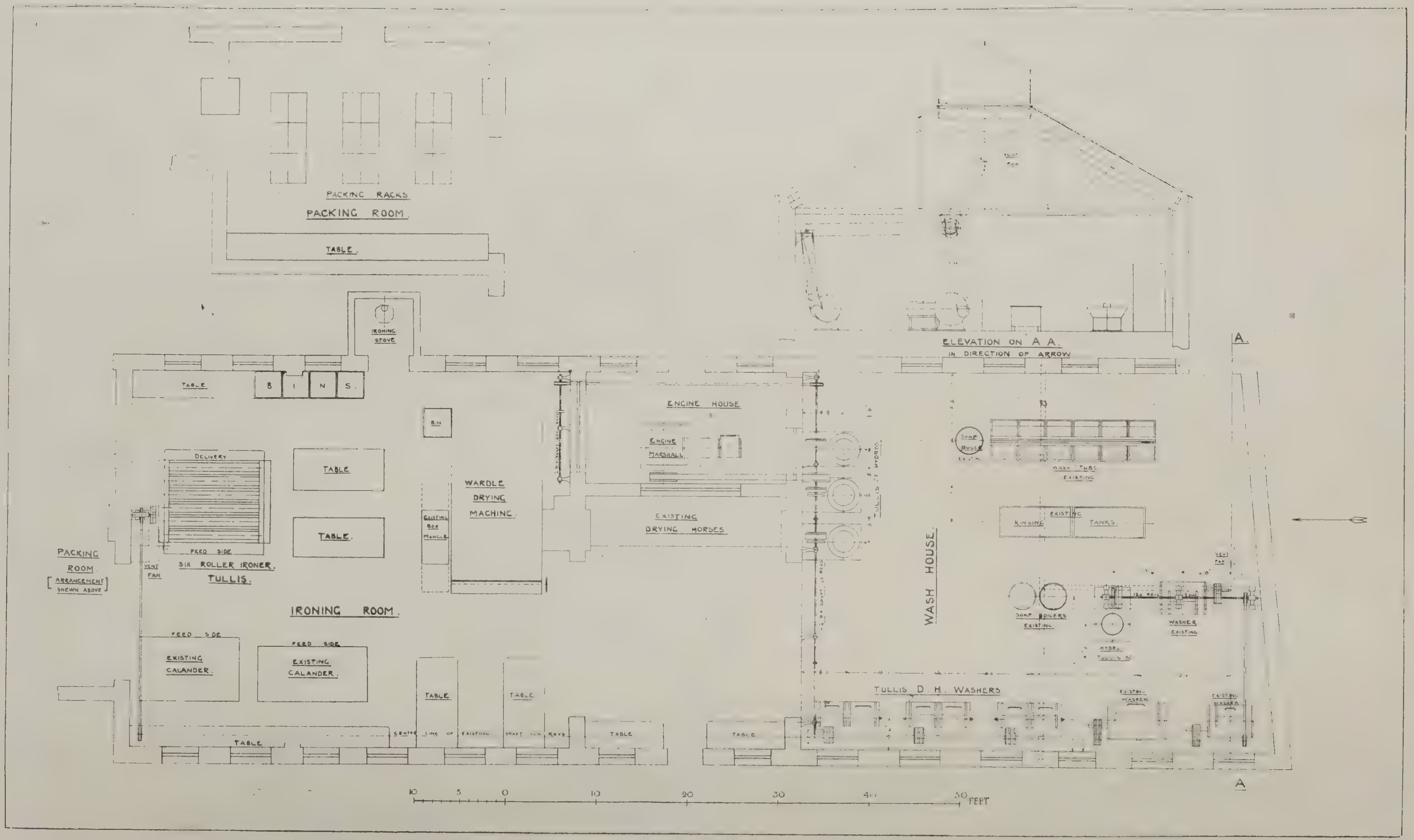
The laundry machinery itself provides a most interesting study, and merits at least a brief description.

Mechanical Washing.

On arriving at the washhouse the batches of linen are sorted out, loaded into trucks, and run alongside the washing machines, which in this laundry number seven in all. Three of these formed part of the new equipment installed last year, and are therefore of modern design. They are built entirely of metal, and are what are known as heavy institution type washing machines, the outer casing being of galvanised steel plate 3-16 in. thick, built in two halves bolted together and riveted to cast-iron ends. The inner shell or washing compartment is of heavy sheet brass, built up in segments perforated with holes, which are pressed out from the inside of the sheet and countersunk, so that there are no sharp projections left, on which the linen might come to grief. This inner shell has a positive reversing movement, making 2½ revolutions in one direction, then reversing and making a like number of revolutions in the opposite direction, by which means the contents of the machine are prevented from getting into a ball.



ST. JOHN'S ROAD WORKHOUSE, UPPER HOLLOWAY, LONDON: IRONING AND FINISHING ROOM.



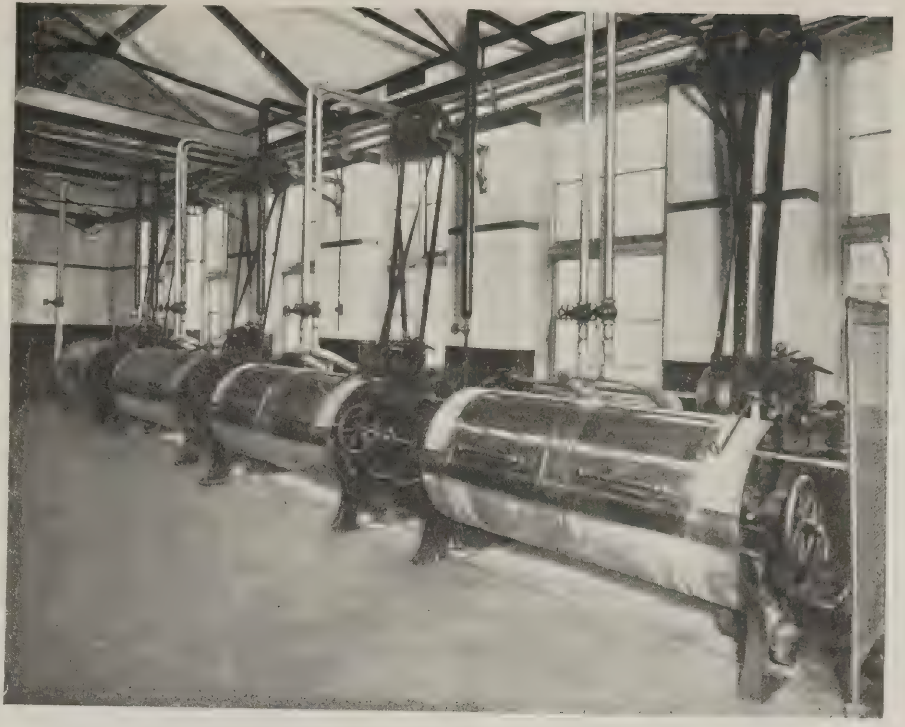
ST. JOHN'S ROAD WORKHOUSE, UPPER HOLLOWAY, LONDON: PLAN SHOWING DISPOSITION OF LAUNDRY PLANT.

Fixed to the brass shell are five brass V-shaped pieces called rubbers, or beaters, which, being hollow, fill with water during the revolution of the shell, and shower it on to the load, thus, as may be inferred, assisting materially in the washing process. The goods are carried up on the side of the revolving cage until the weight overcomes their adhesion to the cage, and they drop into the water, which is being kept in a continual state of turmoil by the rotating movement of the shell and the spraying of the water from the rubbers. The machine is driven by fast-and-loose pulleys and open and cross belt, and will wash, boil, and rinse a heavy load of goods equal to, say, 100 bed-sheets in forty minutes.

After being removed from the washing machines through the doors, the loads are now ready for being dealt with by the hydro-extractor.

Hydro Extractor.

This machine takes the place of the old-fashioned wringer, and its purpose is to extract all the loose water from the linen by centrifugal force. The extractor is cylindrical in form, and has two casings, the outer shell being constructed of mild steel boiler plate, and the inner basket in which the load is packed, of galvanised steel perforated with 3-16 in. in diameter holes. This basket is accurately balanced on a steel spindle, and runs at a speed of 1,200 revolutions per minute, the effect being to extract the loose water from the load and throw it out of the cage through the perforations, from which point it is carried away by a drain-pipe fitted to the outer casing. The machine is driven by countershaft and pulley, the latter connected to the spindle on which the basket s balanced. The belt is thrown in and out of action by a lever within easy access of the operator, and a footbrake is fixed at he front of the machine to bring the revolving basket to a standstill. A hydro extractor similar to the new machines fitted up here last year, will rough-dry a oad equal to 100 heavy bed-sheets in one hour, taking fifteen minutes per load.



ST. JOHN'S ROAD WORKHOUSE, UPPER HOLLOWAY, LONDON: WASHING MACHINES.

As already stated, the hydro-extractor only removes the rough water from the goods, which are now in a semi-dry condition, and ready for treatment under steam heat in the drying machine.

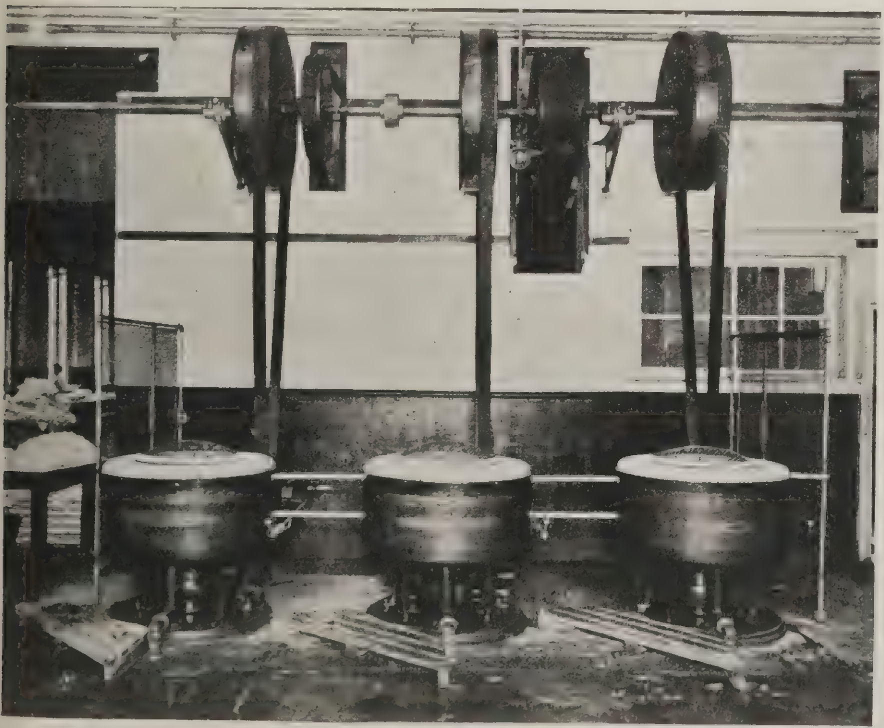
Drying Machine.

This machine, recently installed, is on the latest travelling band principle, which dries the article very quickly and with the minimum of handling. The apparatus consists of a wood-built chamber measuring 20 ft. by 10 ft., with an additional space of 5 ft. by 3 ft. 6 in. for the heating element, fitted internally with a travelling band, on which are fixed hooks for suspending the articles during their progress through the heated chamber. The operator does not require to enter the chamber at all, the band being operated by hand wheels at each end. As the band travels the linen is placed on the hooks from the outside, and after passing through is automatically unhitched at the other end and dropped into a shoot which carries it to the receiving baskets. The heating element inside the chamber consists of steam radiating coils, having a heating surface of 450 sq. ft. The circulation of fresh hot air and ventilation generally is maintained by three fans of the wing disc type. Either live or exhaust steam can be used in this machine, which will dry 600 pieces per hour. The articles are now ready to be finished in the ironing and finishing machines.

Ironing and Finishing Machines.

Of these there are three in use here. As is the case in all workhouse laundries, the bulk of the articles being treated do not require to have any degree of finish such as is required on tablecloths or napkins, so that multiple roller machines are most suitable. One of the recent installations in the ironing and finishing room is a large six-roller ironing, drying, and finishing machine, with rollers 120 in. long by 12 in. in diameter, which is capable of overtaking an astonishing amount of work. This calender comprises six polished cast-iron rolls covered with felt blankets, revolving in polished, steam-heated beds of cast-iron, which are bolted to cast-iron side frames or cheeks.

The linen is fed into one end of the machine on bands (which make for safety, as the operator's fingers do not come near to the revolving roller), and travel over the polished steam-heated beds, being all the time subjected to the pressure of the revolving rollers. When delivered at the sixth roller, the heaviest articles are perfectly dry and do not require a second passage. The machine works at 60-lb. pressure to the square inch. Four operators are required, two feeding and two receiving, and the machine will iron, dry, and finish 140 heavy bed-sheets per hour.



ST. JOHN'S ROAD WORKHOUSE, UPPER HOLLOWAY, LONDON: HYDRO EXTRACTORS.

In the ironing and finishing room, of which a view is given on page 31, there are a number of subsidiary machines and appliances in the laundry, such as soaking tanks, hand wash-tubs, starchers, stove and hand irons, and a box mangle; but from the brief description given of the principal machines and their purposes it can be gleaned that the laundry plays an important though unassuming part in the daily routine of a large public institution.

The plant illustrated was supplied by Messrs. D. and J. Tullis, Ltd., of Clydebank.

THE PRACTICE OF ARCHITECTURE IN FRANCE.*

It may be of interest to remark that French architects suffer in the same way as we do from the competition of unqualified men, but although the public are beginning to recognise the fact that it is cheaper in the end, and certainly more satisfactory, to employ an architect who has the State diploma, as yet there is no system of compulsory registration in France.

The two principal architectural societies in France are: (1) the Société Centrale, founded in 1840, which occupies a position corresponding to our own Institute. The society is open to all practising architects, but candidates must be vouched for by at least three members of the Société Centrale; they must be more than thirty years of age and have signed the *code des devoirs professionnels.* The present membership of the society is about 350 town and 150 provincial members. Only architects are admitted to membership. (2) The Société des Architectes Diplomés par le Gouvernement, which was founded in 1877, and then consisted of only ten members, occupies a position analogous to our own architectural associations. The only qualification necessary (at present) is to have passed the diploma examination, and members are admitted who are still in the Ecole des Beaux-Arts. It is probable however, that candidates will soon have to be proposed and seconded by two members of the society before being elected. All candidates are required to sign the *code des devoirs professionnels.* Surveyors and engineers are admitted as honorary members only. The present membership of the Société des Architectes Diplomés par le Gouvernement is about 1,300, including a number of Americans who have passed through the French schools.

The other professional bodies include the Union Syndicale des Architectes Français, confined chiefly to architects in the Government department of the Monuments Historiques et Edifices Diocésains; small societies such as the Société des Diplomés de l'Ecole Spéciale d'Architecture; and special societies for the defence of professional interests, such as the Société de Défense Mutuelle des Architectes Français and the Société d'Assistance Confraternelle des Architectes Français.

With regard to the method of attacking a problem, the procedure is much the same as our own: sketch plans to a small scale corresponding to 1/16 in., ⅛ in., are prepared, and a rough estimate of the price, worked out on the basis of the prices in the Séries des Prix, not by "cubing," but on the pricing of the square mètre and submitted to the client, who eventually approves (or otherwise) of the plans and estimate.

Contract drawings are then prepared, usually to a scale of 2 centimètres to the mètre, or approximately, ¼ in. scale, together with the following written documents: (1) Devis Descriptif, or specification; (2) Devis Estimatif, or priced bills of quantities; and (3) Le Cahier des Charges, a printed document stating the general conditions of contract.

The actual contract, or *marché,* is a short legal document defining the mutual obligations of the builder and employer.

The "Séries des Prix," published by the Société Centrale and the Société des Architectes Diplomés par le Gouvernement, is generally taken as the basis for pricing for estimates and contracts, and although subject to the usual market fluctuations, allows a 10 per cent. profit to builders on materials, etc., and is usually 20 per cent. above lowest prices at date of publication.

There are two forms of contract, as with us, *i.e.*, (1) work carried out on a schedule, and (2) by competitive tender. Payment is made on the architects' certificates, but builders furnish architects with a time and material account, which is examined by a *metteur-vérificateur*, and as this account is based on the "Séries des Prix," this is often considerably in excess of real value of works. These accounts (corrected in a special column, in red ink) are submitted to the client on completion, usually to his complete mystification, and, with the special *bordereaux* for steel construction, etc., rather complicate the architect's existence.

Fees, as with us, are usually at the rate of 5 per cent. of the *gross* value of work done—*i.e.*, before the accounts have been adjusted and prices reduced. Work under the value of £200 = 5,000 fr., is usually charged for at the rate of 7 per cent.

Appointments as Government architects are generally bestowed upon Grand Prix men on their return from Rome. They are entitled to apply for any vacancy under the Service des Bâtiments Civils et Palais Nationaux without sitting for the competitive entrance examination which other candidates have to pass. It does not, however, follow that a Prix de Rome man obtains an appointment immediately on his return, as there may not be a vacancy.

Other Government posts include the Service des Monuments Historiques, for which only approved architects can compete; and posts under the Ministries of Agriculture, Colonies, Foreign Affairs, Interior, and the Post and Telegraphs, which are obtained by candidates selected by the Ministers, and not by competition.

Chief architects are usually paid a 5 per cent. commission on work carried out; Architectes-Ordinaires are paid about 2 per cent. commission on the value of work superintended.

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* Extracts from a paper on "Modern French Architecture," read before the Architectural Association of Ireland by Mr. P. Cart de Lafontaine, December 11, 1913.

THE R.I.B.A. AND REGISTRATION.

Council's Recommendation Adopted.

At a very fully attended meeting of the R.I.B.A., held at 9, Conduit Street on Monday evening, January 5th, Mr. Reginald Blomfield, A.R.A., president, in the chair, it was unanimously resolved to adopt the Council's recommendation to apply for a new charter establishing a register of architects. An amendment in favour of promoting a Registration Bill in Parliament was lost.

NEWS ITEMS.

Dissolution of Partnership.

The partnership between Mr. Hora Cheston and Mr. Joseph Craddock Pe kin, of 3, Tudor Street, London, E.C., h been dissolved by mutual consent.

Change of Address.

Messrs. Hatchard-Smith and So F.R.I.B.A., have removed from 76, Wa ling Street, E.C., to 6, Duke Stree Adelphi, W.C. The telephone number Regent 4345.

Partnership.

Mr. Hastwell Grayson, M.A F.R.I.B.A., has taken into partnersh Mr. Leonard Barnish, A.R.I.B.A. Pra tice will be continued at 606, Royal Liv Buildings, Liverpool, under the title Grayson and Barnish.

Correction.

In the article on "Design and Pla ning of Open-Air Schools," which a peared in our issue of December 31, should have been stated that Mr. H. Cooper was associated with Mr. R. Williams in the preliminary work in co nection with the Kettering scheme.

Augmented Partnership.

Mr. William Haywood, F.R.I.B.A., 245, Bristol Road, Birmingham, h joined Messrs. Buckland and Farmer partnership. Practice will henceforth carried on under the style of Bucklan Haywood, and Farmer, at Norwich Uni Chambers, Congreve Street, Birminghan

Postponement of an A.A. Paper.

Owing to indisposition, Professor C. Reilly has had to postpone the reading January 19th, before the Architectur Association, of his paper on "The Ne Grec Movement in Architecture in t Eighteenth and Nineteenth Centuries The date now arranged for its delivery March 30th, and in consequence there w be no meeting on January 19th.

Replica Gates at Beddington.

We published in our issue for Decemb 24th a note concerning the old gates at t entrance to the Royal Female Orpha Asylum, Beddington, which have bee sold for removal to America. One of t conditions of sale was that new gates replica of the old ones be supplie These, we understand, are being prepar by Mr. J. Starkie Gardner.

The Longest Masonry Dam.

A reinforced-concrete dam, 8,000 long, raising the water level 51 ft., w recently put into operation by the closi of its sluice gates. This dam was bu for the Canadian Pacific Railway on t Bow River at Bassano, Alta., to comple an irrigation system of 2,000,000 acres. has taken three years to carry out the pr ject. The dam, which diverts the wat into a trunk canal, is the longest mason dam in the world, outclassing the Assu in Egypt, which is 6,400 ft. long.

Workhouse Fire Protection.

The fire protection arrangements at t Ipswich Workhouse have just been au mented by the installation of a statione steam fire-pump, which has been suppli by Messrs. Merryweather and Sons, London. It has a capacity of 350 gallo per minute for fire service, and, in add tion, it will also be employed for filli the water tanks at the workhouse, f which purpose it is required to deliver 200 gallons per minute. The pump, which akes its steam from the existing workhouse boiler, is able to start at pressures as low as from 20 to 30 lbs.

COMPETITIONS.

Proposed Swimming Baths, Hendon.

The following is a summary of the con- litions of the above competition, of which Mr. Herbert W. Wills, F.R.I.B.A., has een appointed the assessor. Premiums of £100, £75, and £50 will be awarded to he authors of designs placed first, second, nd third respectively. The author of lesign placed first will be appointed archi- ect, unless his estimate exceed the lowest eliable tender by 10 per cent.

DRAWINGS REQUIRED.

Plans of each floor to a scale of -16th in. to a foot, with a site plan to a cale of 30 ft. to an inch, showing neigh- ouring public buildings. Elevations of wo or more fronts as may be necessary to how the design and longitudinal and ransverse sections. No perspective draw- ngs or details to be submitted.

ACCOMMODATION REQUIRED: GENERAL.

On the site shown a public library may e erected in the future, and extensions f the Council's offices are contemplated. xtensions of the swimming baths must lso be allowed for. The swimming bath ust be so designed as to permit of its eing used as a public hall. The block lan should show how the various build- gs can be best arranged on the site to ake an architectural group, with suit- ble arrangements for entrances and ap- roaches. Suitable access on the fire ation side of the site must be shown to e mortuary block.

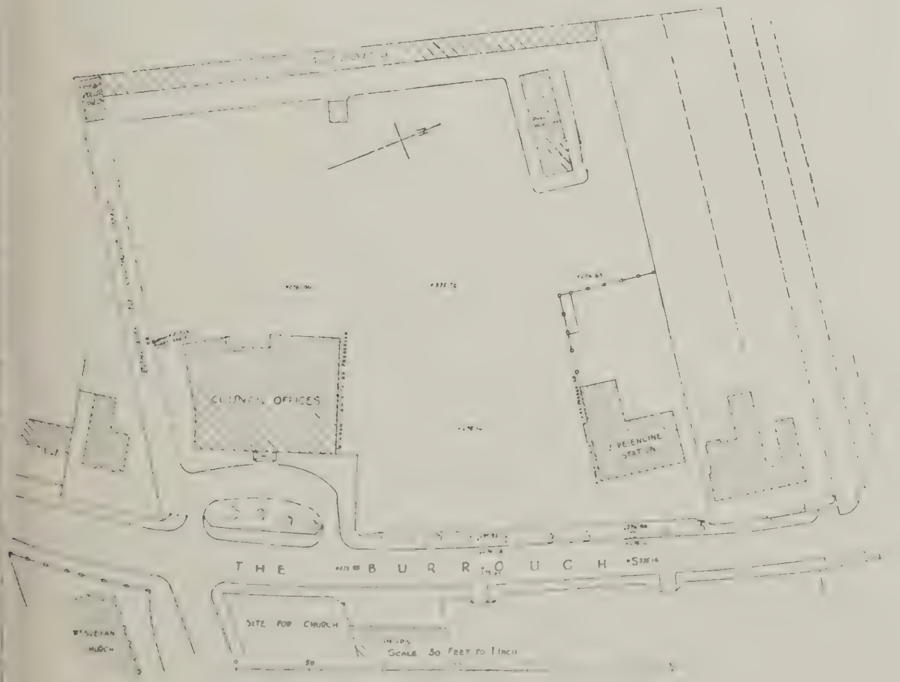
THE BATHS.

Size of pond, 100 ft. by 40 ft. Hall in hich pond is arranged, 120 ft. by 60 ft., ith an alcove of the whole width of baths ft. deep with raised floor, to be used as platform if so required. Corridors at des of baths 6 ft. wide, and the necessary oss-corridors of hall at end to admit of easy circulation around baths. Foot and shower baths, w.c.'s, and urinals to be provided in connection with baths and diving apparatus. Dressing boxes round baths to be of teak and to fold forming a panelled dado around bath. The ceiling over bath to be treated in an architectural manner, the question of acoustics to be borne in mind. The swimming bath will be used as a gymnasium at certain seasons, and arrangements for provision and storage of suitable wooden flooring will have to be made. Accommodation to be provided for spectators of swimming contests, etc., but in view of possible future uses of the baths this accommodation should rather take the form of a gallery than of an amphitheatrical arrangement of raised staging. Alternatively, the alcove mentioned above might be used for this purpose at competitor's option. Four first-class men's slipper baths, eight second-class men's slipper baths, three first-class women's slipper baths, six second-class women's slipper baths. Each set of slipper baths to have its waiting-room and w.c. accommodation. A room 60 ft. by 30 ft. to be architecturally treated and to be so placed that it can be divided into three clubrooms, with suitable lavatory accommodation, is to form a part of the scheme. The subdivision of the room, it is suggested, should be effected by movable panelled partitions. A ticket-office, men's and women's entrances, to be provided, with usual accommodation. Heating chamber, coal store, boiler house, establishment laundry, and aeration plant to form part of scheme. The future extensions will consist of doubling the slipper bath accommodation and the provision of two more swimming baths, the respective sizes of the ponds to be 60 ft. by 30 ft. (for ladies and schoolchildren). In each case dressing boxes and other adjuncts are required. The roofs of these smaller baths may be composed of simple steel trusses, and the dressing-boxes can be fixed.

COST.

The Council are advised that the buildings can be provided at a rate of 9d. per cube foot, at which price all designs must be cubed. Additional sums to be added for engineering, drainage, and the treatment of boundary walls and approaches. The local by-laws must be complied with by every competitor. A schedule is issued with the conditions of competition, which must be filled in with estimate of cost.

All questions to be received by the Clerk to the Council not later than January 20th. Designs to be sent in on or before March 2nd, 1914.



HENDON SWIMMING BATHS COMPETITION:3 SITE PLAN.

Architects for Metropolitan Water Board Offices.

At a meeting last week of the Metropolitan Water Board, the General Purposes Committee, authorised by the board to select six architects to prepare competitive plans for the new central offices, and to appoint a professional assessor to advise on conditions of competition and on the design submitted, brought forward the following names: Mr. Burnett Brown, Mr. Edwin Cooper, Mr. H. O. Ellis, Mr. E. T. Hall, Mr. H. T. Hare, and Messrs. Warwick and Hall. The committee stated that they had invited the president of the Royal Institute of British Architects to nominate a gentleman to act as assessor.

"Country Life" Cottage Competition.

The prospect of the countryside being covered with some thousands of cottages all of a standard type, as a result of projected legislation, has moved the proprietors of "Country Life" to institute a competition by which it is hoped to provide a more satisfactory solution of the problem. The competition, the outcome of a suggestion by Lord Curzon, provides for the erection in eighteen different counties (on sites that have been provided by a number of eminent landowners) of pairs of cottages in keeping with local characteristics. The competition includes the design of a pair of cottages to cost not more than £250. A prize of twenty-five guineas will be awarded to each design placed first (*i.e.*, there will be eighteen cash prizes for designs, amounting to four hundred and fifty guineas). In addition the following prizes will be given: Twenty guineas for the best model sent in with any design; ten guineas, five guineas, three guineas, and two guineas for the four best perspective views; selected books to the total value of one hundred guineas (the last are to be awarded as consolation prizes.) The jury of assessors will consist of Mr. Walter Brierley, F.R.I.B.A. (of York), Mr. P. Morley Horder, F.R.I.B.A. (of London), Sir Robert Lorimer, A.R.S.A., F.R.I.B.A. (of Edinburgh), Mr. G. L. Pepler, F.S.I. (hon. secretary Landowners' Rural Housing Society), and Mr. Lawrence Weaver, Hon. A.R.I.B.A. Full particulars of the competition, including site plans, are given in the current issue of the magazine.

Infirmary, Reigate.

The awards in the above competition (Mr. W. Roland Howell, F.R.I.B.A., of Reading, assessor) have been announced as follows: 1st, Messrs. T. R. and V. Hooper, Redhill; 2nd, Mr. G. E. Smith, Southsea; 3rd, Mr. C. Nicholas, London. The design placed first (estimated to cost £7,270) has been referred back to see what economies can be effected.

Town Hall, Nottingham.

Nottingham City Council have decided to appoint a special committee "to consider the advisability of erecting a new town hall on the site of the Exchange, with power to invite competitive designs for the same."

Children's Homes, Burton-on-Trent.

Burton Board of Guardians have decided to invite competitive designs for children's homes, to be erected on land adjoining the workhouse. Prizes of £25 and £10 are to be offered.

Royal Exchange Extension, Manchester.

Forty-nine designs have been submitted in the above competition. The award by the assessor (Mr. J. S. Gibson, F.R.I.B.A.) is expected within a few weeks.

Municipal Offices, Guildford.

Guildford Town Council have decided to invite three local architects to submit competitive designs for proposed municipal offices.

Highway Sign-posts.

Mr. E. S. Sinnott, County Surveyor of Gloucester, has been awarded the first prize of £16, offered by the International Road Congress, for the best design for a standard type of direction post and plates on highways.

Laying-out Scheme, St. Anne's-on-Sea.

The premiums in the competition for the laying-out of the foreshore and of St. George's Gardens, St. Anne's-on-Sea, have been awarded as follows: 1st (£100), Mr. Fred Harrison, of Lytham and Accrington; 2nd (£50), Mr. W. R. Sharp, of St. Anne's and Manchester. Mr. Harrison's estimate of cost for the garden scheme is £5,834, and for the boating lake and baths £8,460.

PROJECTED NEW WORKS.

Isolation Hospital, Henley-on-Thames.

The R.D.C. have adopted plans for the rebuilding of the isolation hospital.

Pavilion Extension, Falmouth.

Falmouth Town Council propose to extend the Princess Pavilion, at an estimated cost of £600.

Workhouse Alterations, Wrexham.

Wrexham Guardians have resolved to carry out alterations at the workhouse at a cost of £1,625.

Baths, Shoreham.

Plans of proposed new baths to be erected at the town hall have been approved by the U.D.C.

Church, Skipton.

The erection is contemplated at Skipton of a new Congregational Church at an estimated cost of £4,000.

School, Malmesbury Park, Bournemouth.

Bournemouth Town Council have decided to build a new school at Malmesbury Park at an estimated cost of £4,000.

Church, Stretford.

A new Church of St. Peter is to be erected at Gorse Hill, Stretford. The cost is estimated at between £7,000 and £8,000

Bridge, Bocking, Essex.

Bocking Rural Council have decided to apply for urban powers to build a bridge over the river at an estimated cost of £1,000.

Pavilion Scheme, Bournemouth.

Bournemouth Town Council have adopted a scheme for the erection of a pavilion on the Belle Vue site at a cost of £60,000.

Hospital, Morpeth.

Morpeth Guardians have been authorised by the L.G.B. to purchase a site at Grange House for the building of a new hospital.

Church, Levenshulme.

Provisional plans have been prepared of a new church to be erected in Clare Road, Levenshulme. The building will cost some £5,000.

Workmen's Dwellings, Sidmouth.

Sidmouth U.D.C. propose to purchase higher and lower Salter's meadows, at a cost of £1,700, for the erection of workmen's dwellings.

Alterations to Workhouse, Devonport.

Plans for alterations and additions to the infirmary and mortuary of the workhouse at a cost not exceeding £640 have been approved.

Infirmary, Lincoln.

Plans, prepared by Mr. Watkins, for a new infirmary at Lincoln, are under consideration by the Guardians. The cost is estimated at £24,100.

Labour Hall for London.

The prospectus for a Labour Hall in London has been approved. It is proposed to build the hall at a cost of £40,000 in the neighbourhood of Holborn.

Town Planning, Hendon.

An inquiry by the L.G.B. has been held at Hendon into the application of the U.D.C. for sanction to prepare a town-planning scheme. The area of the scheme embraces about 5,250 acres.

Cottage-Building Schemes, Cheshire.

The L.G.B. have sanctioned the Northwich U.D.C.'s application for powers to borrow £8,500 to purchase a site and to erect forty-eight cottages for workmen.

Hospital Extension, Milton, Portsmouth

An extension scheme in connection with the infectious diseases hospital, Milton, Portsmouth, to include eighty-four beds, a new nurses' block, and other improvements, is contemplated at an estimated cost of £28,000.

Convent, Sunderland.

A large convent will shortly be erected in Tunstall Road, Sunderland, from plans prepared by Messrs. W. and T. R. Milburn on the instructions of the Reverend Mother of St. Bede's Convent of Mercy, Green Street.

Reinforced Concrete Bridge, Guildford.

Guildford Town Council have instructed the borough surveyor to prepare detailed plan, specification, and estimate for the construction of a new reinforced concrete bridge 40 ft. wide, with a view to an application to the Local Government Board for sanction to the necessary loan.

Buildings, Hemsworth.

The R.D.C. have approved the following plans: Three houses at South Elmsall, for Carlton Main Colliery Co., Ltd.; two houses at South Hiendley, for Mr. Geo. Bowles; addition to engine-house at South Elmsall, for Messrs. Swift Bros.; alterations and additions to Old Crown Inn, South Kirkby, for Mr. C. Darley.

Garden Village, Chester.

The L.G.B. have sanctioned the borrowing by the Corporation of £2,100 for the purchase of 12½ acres of land on the Saltney side of the city. The intention is to erect workmen's dwellings and to develop the garden village as a partial solution of the housing problem. Mr. Patrick Abercrombie, of Liverpool University, is advising the committee on the laying out of the land.

Works, Hull.

The Hull Corporation have approved plans of the Hull Joint Dock Committee for one house on the Joint Dock Estate; T. Foster, additions, Hedon Road and Wyke Street; the Premier Oil Extracting Co., warehouse, Stoneferry; E. Hardman and Son, shed, Bedford Street; Keighley and Co., reconstruction of warehouse, Wincolmlee; Horsley, Smith, and Co., roof, Pelham Street.

Town Hall, St. Pancras.

St. Pancras Borough Council have adopted the following recommendations: (*a*) That a scheme be prepared for the reconstruction of the present town hall in order to afford improved and additional accommodation for the offices of the Council and of the Board of Guardians, and also a rearrangement of the Council Chamber and committee rooms for meetings of the two bodies. (*b*) That the Parliamentary and General Purposes Committee be authorised to obtain the services of a suitable architect at a fee not exceeding 100 guineas, who shall be instructed to submit a rough scheme and estimate of the cost of providing the accommodation required on the present site.

OBITUARY.

Mr. Henry Jones Lanchester

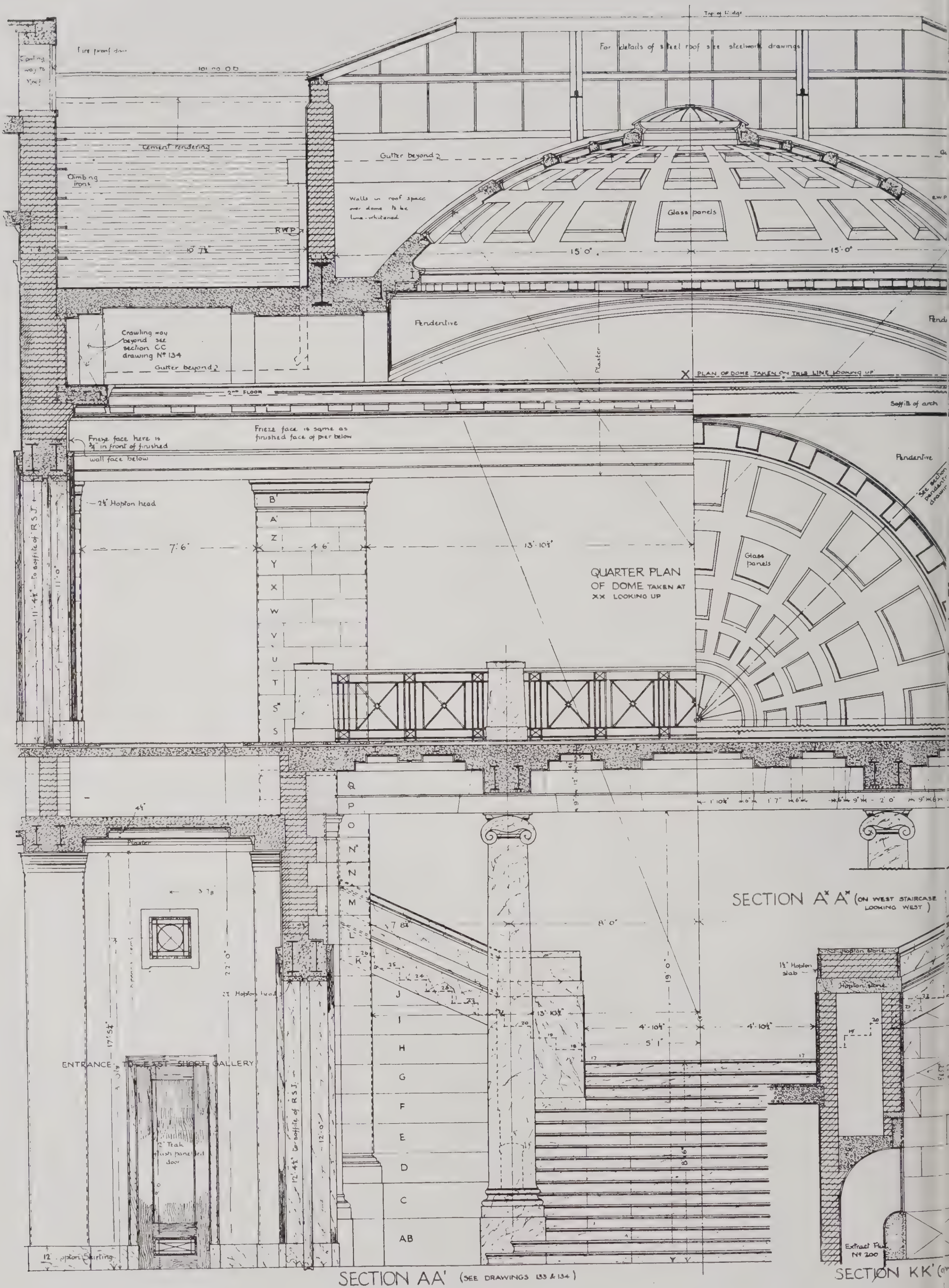
The death, on his eightieth birthday, of Mr. Henry Jones Lanchester, F.R.I.B.A., removes an architect who was the author of part, at any rate, of a stately and dignified piece of town-planning on the south coast, viz., the laying-out of Hove, forty-three years ago. To his architectural activities he added a keen interest in the Volunteer movement, and when this was started joined the "Six-Foot Guards," so called because every member of the corps was 6 ft. or over; he was also an author, one of his publications being, "How to Make a Home Healthy and Comfortable." Mr. Lanchester became an Associate of the Institute in 1874 and a Fellow in 1903. He retired from his membership and from practice in 1908, spending the remainder of his days at his home at Lindfield, Sussex. He celebrated his golden wedding in 1912.

Mr. John Honeyman.

Mr. John Honeyman, who died las Thursday at Bridge of Allan, aged eighty two, was an architect of distinction. He began to practise in Glasgow in 1854 wa elected an Associate of the Royal Scottish Academy in 1892, and an Academician four years later; was a president o the Glasgow Institute of Architects, a Fellow of the Royal Institute of British Architects, and one of the founders of the Glasgow Archæological Society. For many years he was architect of Glasgow Cathedral, and designed much Gothi church work in Perth and the South o Scotland. In his later years he suffered from blindness.

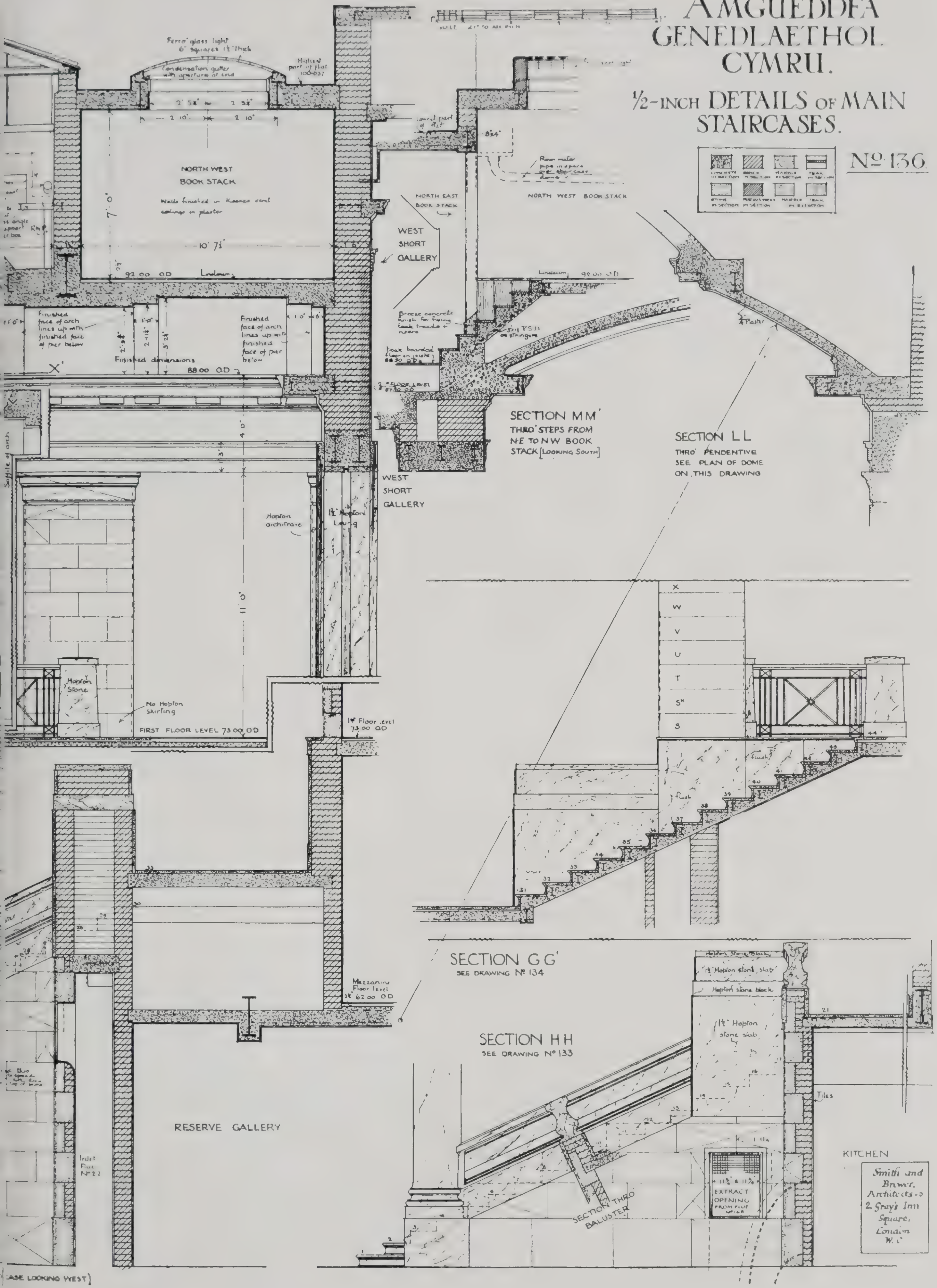
Mr. Alexander Beveridge.

A prominent Scottish builder, in the person of Mr. Alexander Beveridge, has jus died at Perth, where he was identified with many of the more notable public building and mansions. At one time he was president of the Scottish Builders' Federation As a valuator he was in great request, and he was a well-known figure in the socia life and pastimes of Perth.


Top of Ridge
For details of steel roof see steelwork drawings
Fire proof door
Crawling way to roof
101 00 O.D
Cement rendering
Climbing irons
Walls in roof space over dome to be lime-whitened
Gutter beyond
RWP
19' 7½"
Glass panels
15' 0"
15' 0"
Pendentive
Plaster
X PLAN OF DOME TAKEN ON THIS LINE LOOKING UP
Crawling way beyond see section CC drawing Nº 134
Gutter beyond
2ND FLOOR
Soffit of arch
Frieze face here is ¾" in front of finished wall face below
Frieze face is same as finished face of pier below
Pendentive
See section pendentive drawing
2½" Hopton head
To soffite of R.S.J.
11' 0"
7' 6"
4' 6"
13' 10½"
QUARTER PLAN OF DOME TAKEN AT XX LOOKING UP
Glass panels
B'
A'
Z
Y
X
W
V
U
T
S*
S
Q
P
O
N*
N
M
L
K
J
I
H
G
F
E
D
C
AB
1' 10½"
1' 7"
2' 0"
3' 7⅛"
22' 0"
17' 5¼"
2½" Hopton head
7' 8¼"
8' 0"
19' 0"
13' 10½"
4' 10½"
5' 1"
4' 10½"
8' 6"
ENTRANCE TO EAST SHORT GALLERY
2" Teak flush panelled door
12' 4½" to soffite of R.S.J.
12' 0"
12" Hopton Skirting
SECTION A* A* (ON WEST STAIRCASE LOOKING WEST)
Hopton stone
1½" Hopton slab
Hopton stone
Extract Flue Nº 200
SECTION AA' (SEE DRAWINGS 133 & 134)
SECTION KK' (on

WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XII.—NATI

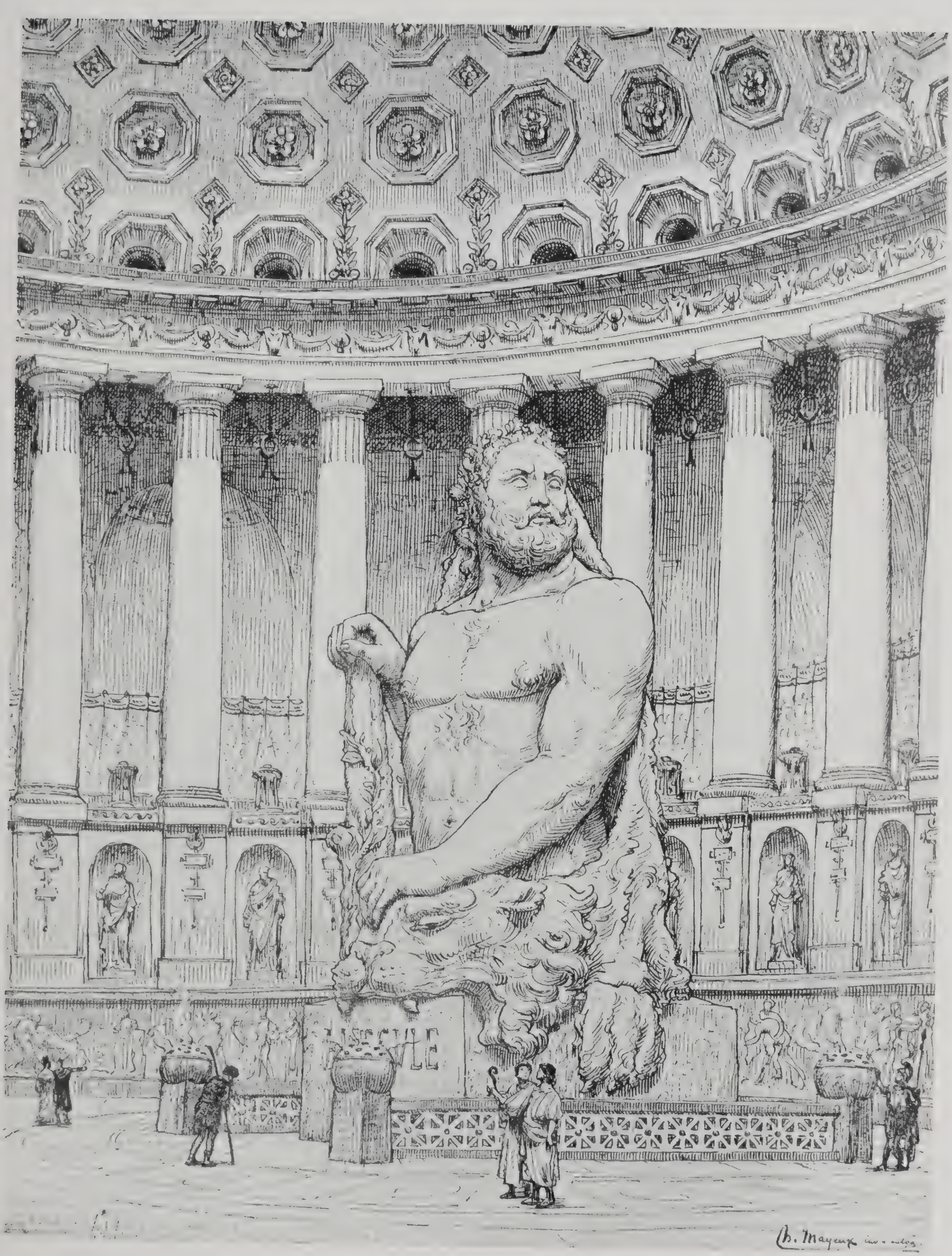
SMITH AND BREWE



AMGUEDDFA GENEDLAETHOL CYMRU.
½-INCH DETAILS OF MAIN STAIRCASES.
Nº 136.
SCALE ½" TO AN INCH
NORTH WEST BOOK STACK
Walls finished in Keenes cemt ceilings in plaster
Ferro' glass light 6" squares 1¼" thick
Condensation gutter with aperture at end
Highest part of flat 100.037
Lowest part of flat
NORTH EAST BOOK STACK
WEST SHORT GALLERY
NORTH WEST BOOK STACK
Rain water pipe in space over staircase dome
Linoleum 92.00 OD
Breeze concrete finish for fixing teak treads & risers
Teak boarded floor
3" FLOOR LEVEL
SECTION MM' THRO' STEPS FROM NE TO NW BOOK STACK [LOOKING SOUTH]
Plaster
SECTION LL THRO' PENDENTIVE SEE PLAN OF DOME ON THIS DRAWING
Finished face of arch lines up with finished face of pier below
Finished dimensions
88.00 OD
Hopton architrave
1½" Hopton Lining
Hopton Stone
No Hopton Skirting
FIRST FLOOR LEVEL 73.00 OD
1st Floor Level 73.00 OD
WEST SHORT GALLERY
Soffite of arch
X W V U T S S
Flush
SECTION GG' SEE DRAWING Nº 134
SECTION HH SEE DRAWING Nº 133
Hopton Stone block
1½" Hopton stone slab
Hopton stone block
1½" Hopton stone slab
Tiles
KITCHEN
EXTRACT OPENING FROM FLUE
SECTION THRO BALUSTER
Mezzanine Floor level 62.00 OD
RESERVE GALLERY
Inlet Flue Nº 22
ASE LOOKING WEST]
Smith and Brewer, Architects, 2 Gray's Inn Square, London W.C.

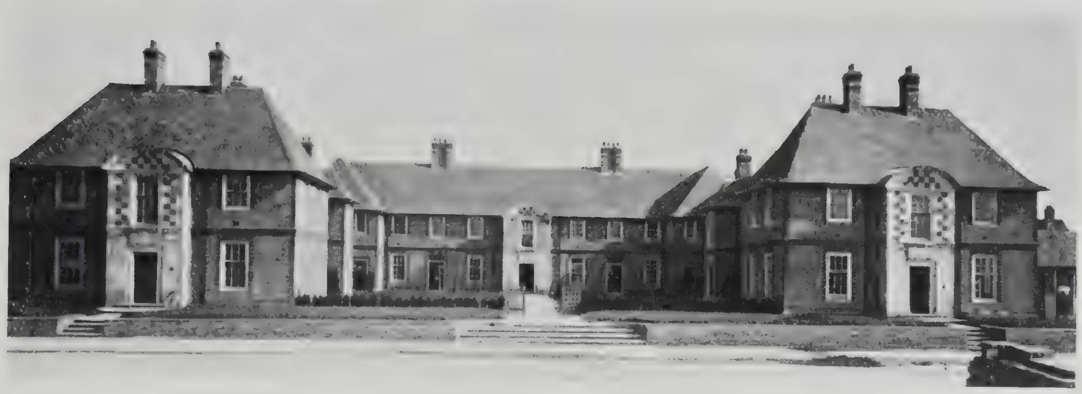
USEUM OF WALES, CATHAYS PARK, CARDIFF. DETAILS OF MAIN STAIRCASES.

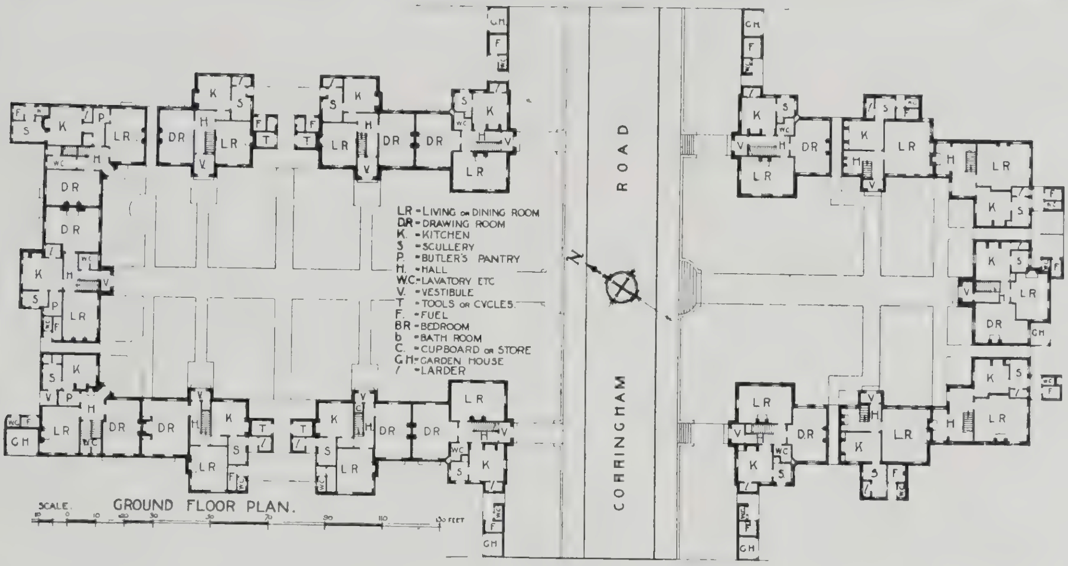
.B.A., ARCHITECTS.

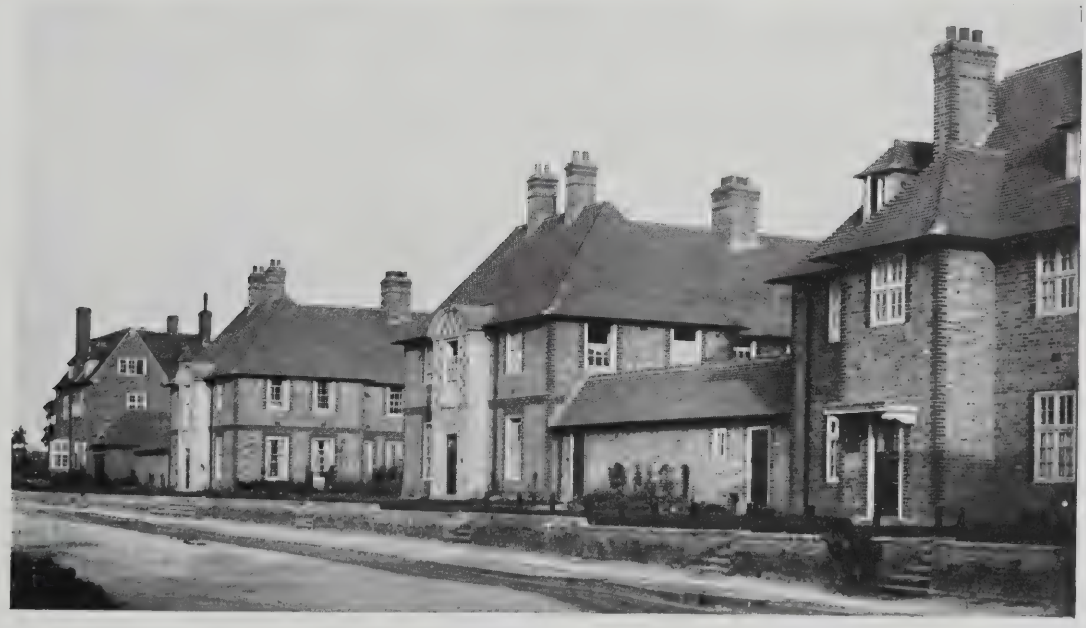


STUDENTS' DRAWINGS. III.—TEMPLE OF THE VICTORIOUS HERCULES.

COMPOSITION BY M. HENRI MAYEUX.

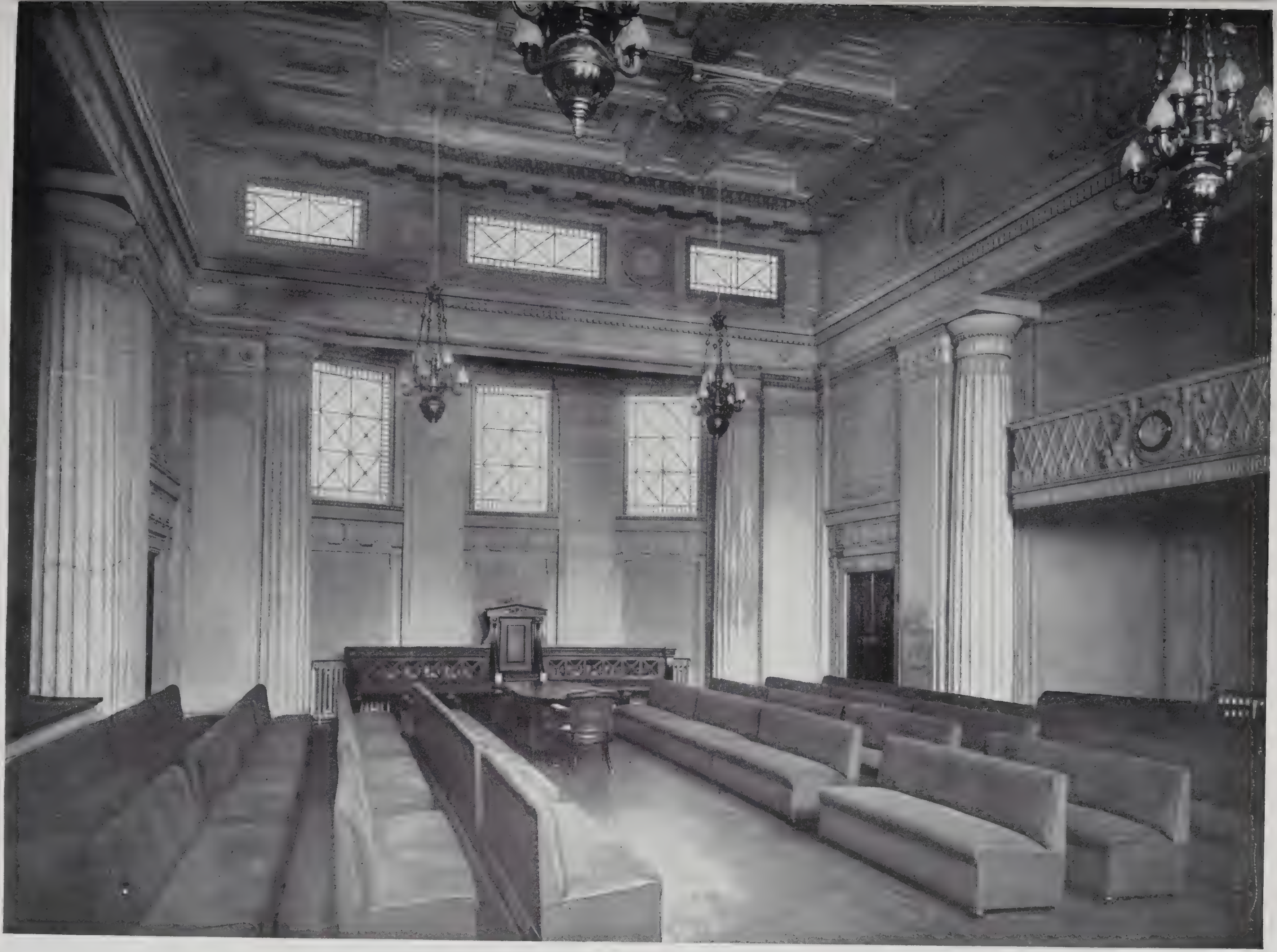






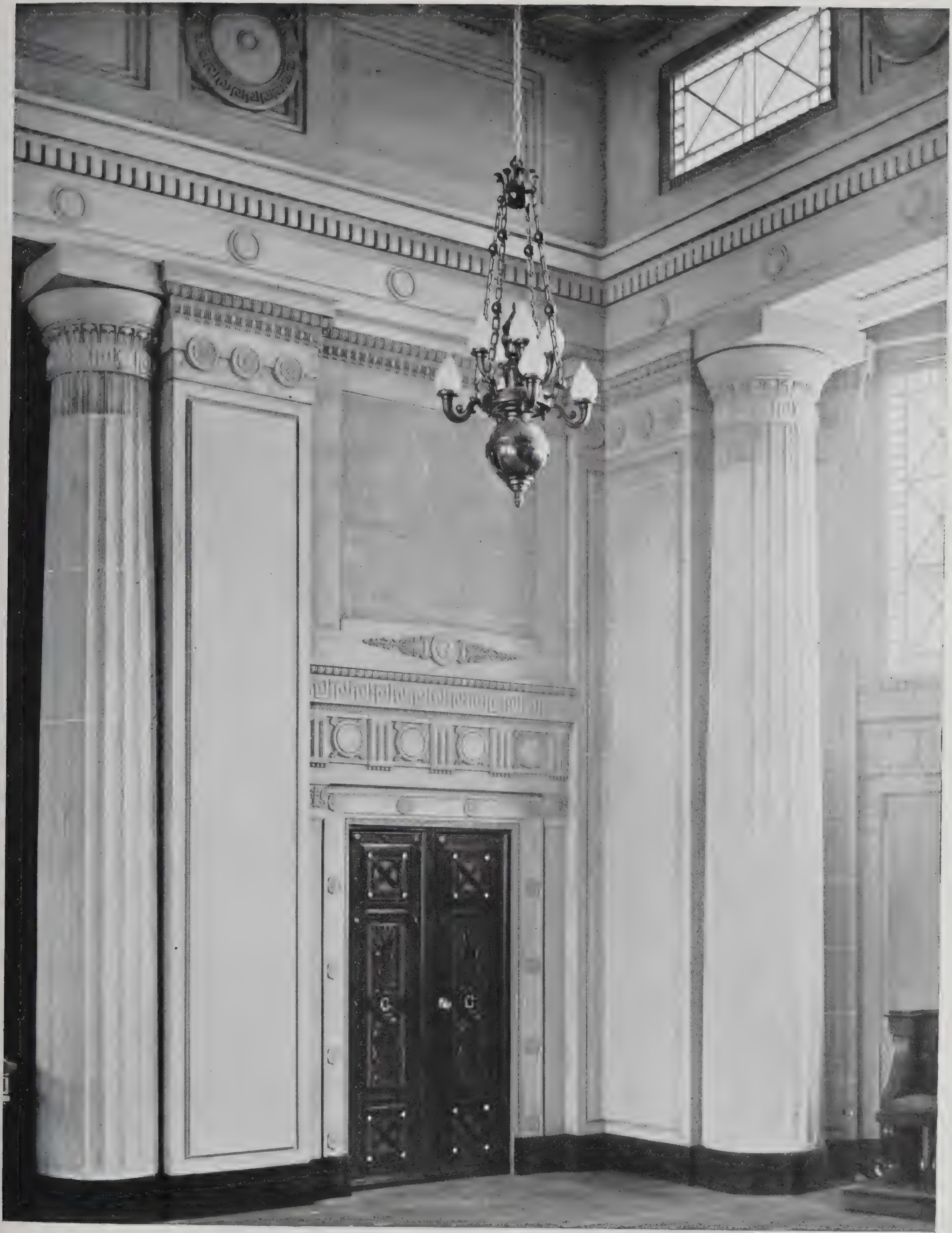
MODERN DOMESTIC ARCHITECTURE. XVII.– HOUSES IN CORRINGHAM ROAD, HAMPSTEAD GARDEN SUBURB.

BARRY PARKER AND RAYMOND UNWIN, F.F.R.I.B.A., ARCHITECTS.

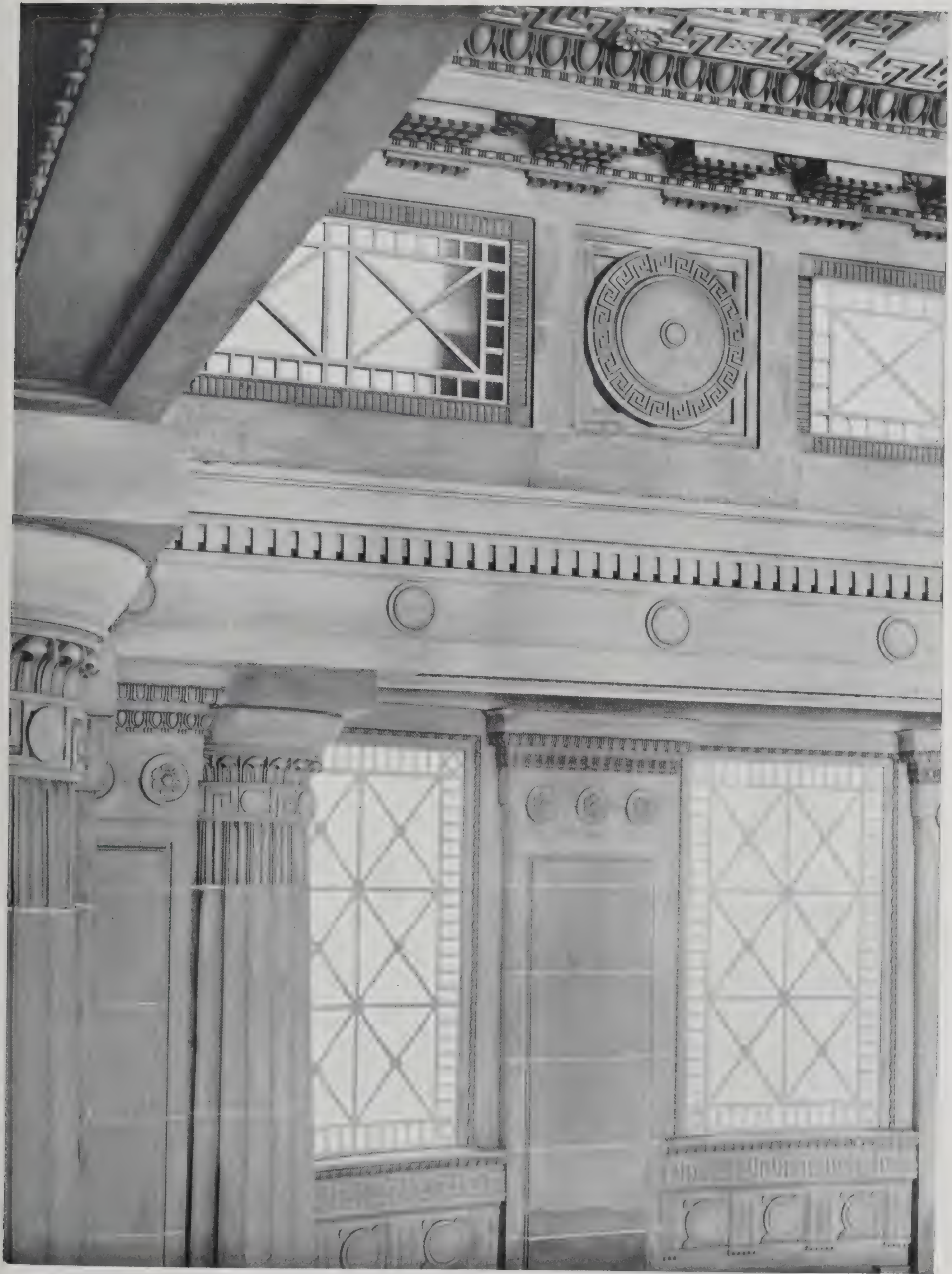


CURRENT ARCHITECTURE. XXXVII.—GILMOUR HALL, STUDENTS' UNION, LIVERPOOL.

PROFESSOR C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.

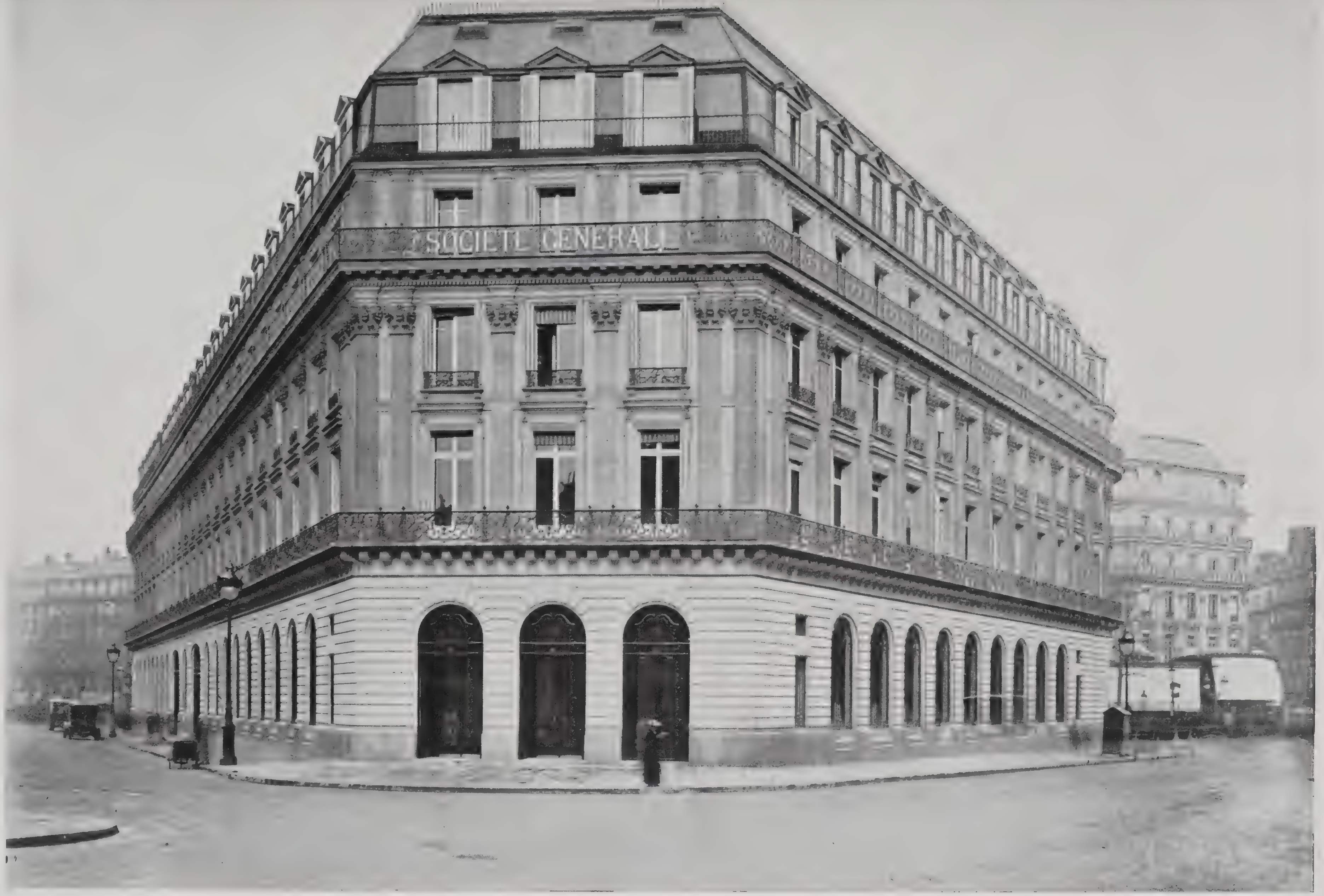


CURRENT ARCHITECTURE. XXXVIII.—GILMOUR HALL, STUDENTS' UNION, LIVERPOOL: DETAIL.
PROFESSOR C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.



CURRENT ARCHITECTURE. XXXIX.—GILMOUR HALL, STUDENTS' UNION, LIVERPOOL: DETAIL.

PROFESSOR C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.



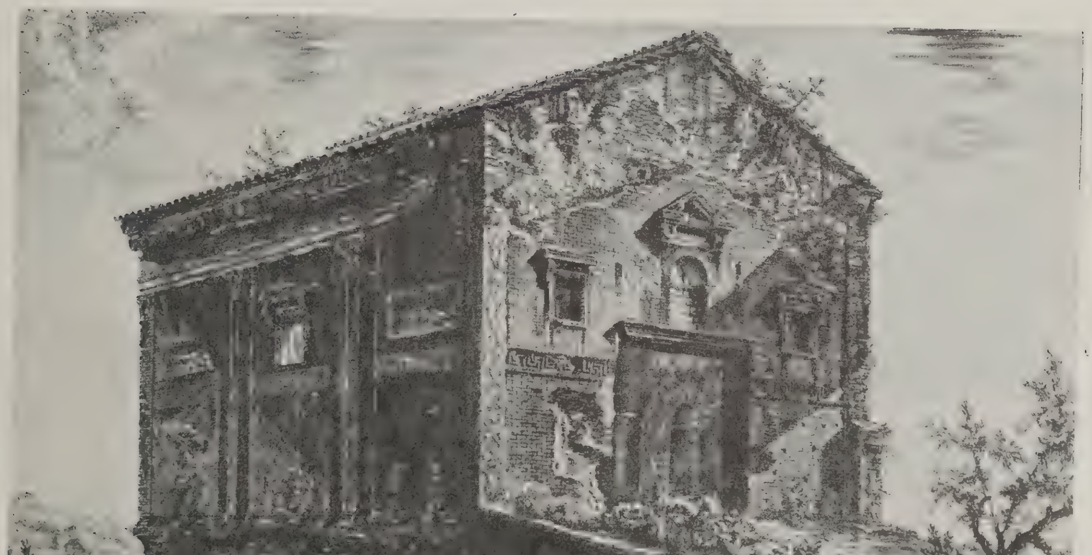
CURRENT ARCHITECTURE. XL.—NEW BUILDING FOR THE SOCIÉTÉ GÉNÉRALE, BOULEVARD HAUSSMANN AND RUE HALÉVY, PARIS.

J. HERMANT, ARCHITECT.

THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, January 21, 1914. Volume XXXIX. No. 994.

No. 68.



(*From Piranesi.*)

THE ARCHITECTS' &
BUILDERS' JOURNAL.

JANUARY 21, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 994.

The Town Planning Institute.

THE practice of Town Planning has, since the passing of the Act of 1909, gradually become more and more specialised. Thus it was inevitable that sooner or later those who have for years exerted their entire energy in its advancement and practical demonstration should have felt it incumbent upon them to form themselves into a society that would give weight and impetus to the movement, besides securing for its members all the advantages of combination and conference, and investing them individually and corporately with the definite and distinctive status to which their specialisation entitles them.

So wide is the scope of Town Planning that the combined efforts of members of several professions are incapable of altogether covering the field of its operations; and even in its side issues the isolated effort of a member of one of these professions is unreliable without reference to the specialised knowledge of others.

The practice of Town Planning is not altogether confined to the operations of the Town Planning Act. Here it may be said to touch the main issues involved, but in the full extent of its scope it deals with every question that affects the civic structure. Architecture, engineering, law, finance, hygiene, and economics are only some of the more prominent of the studies that are involved.

It would seem that no information or knowledge is too remote to be of service in Town Planning. Theoretically speaking this is so, but in actual practice the bulk of the work to be undertaken by the Town Planner is included in the curriculum of the architect, the engineer, and the surveyor; whilst supplementary to the efforts of these it is ever necessary to draw upon the specialised knowledge of the sociologist, the lawyer, and the medical officer.

It is not sufficient that a member of the Town Planning Institute be simply an ordinary member of one of these professions; he must have studied the work of others in so far as it has a bearing on Town Planning. The architect who has for years been engaged in the practice of Town Planning has gradually acquired a knowledge of the issues involved which are dealt with by the members of these professions. The engineer, to be a member of the Town Planning Institute, must have acquired sufficient knowledge of building to enable him to judge of the uses that can be made of building sites; sufficient knowledge of surveying to enable him to appreciate the possibilities inherent in their measurement and valuation; sufficient insight into commercial and social relations to enable him to plan his developments in a progressive direction; and sufficient knowledge of law, hygiene, and economics to enable him to understand the practical and wholesome extent of his undertakings. So that a member of the Town Planning Institute must have a specialised knowledge, and by training be able to coordinate the main issues of several professions.

Members of the architectural, engineering, and surveying professions are perhaps in closest touch with the actual operations of Town Planning; others an pate, supplement, or administer its undertaki Hence, in drafting the constitution of the Institut Town Planners, it was found necessary to m distinctions of membership, not only as regards ness of experience and direction of influence but as regards intimacy of association. Members h therefore, been classified as follows:

1. Members. (a) Members of the R.I.B.A., I. or S.I., who have been associated with the practic Town Planning. (b) Members of professions have attained a special degree of eminence in nection with the planning of cities and towns.

2. Associates. Members of the above profess who have acquired an approved standard of profici in Town Planning.

3. Associated Members. Members of a profes or others who have taken an active interest in on more of the many aspects of Town Planning.

4. Honorary Members. Distinguished persons have taken a special interest in Town Planning.

The founding of an Institute of Town Planners be looked upon as a confession on the part of mem of the individual professions that no one professi exclusively capable of correlating the many aspec knowledge that it is necessary to draw upon in practice of Town Planning. The Town Planning by the conditions of its inception, provides opport ties to engineers and surveyors who fill official post practising Town Planning that are not oper architects in private practice.

Procedure under the Town Planning Ac separable into three stages, corresponding to the t principal maps that have successively to be subm to the Local Government Board for their appr It may be said that members of the professio surveying are best equipped to deal with the prob to be solved at the first stage of procedure. engineer is by training best qualified to prepare No. 2, which shows the direction of the main ro and the architect, with his knowledge of buildin alone able to deal with the filling in of the final ma so far as it relates to site-planning and the arrange of local roads.

In America, where the efforts of the Town Pla have so far been directed to street rectification and beautification, members of the professions of a tecture and landscape architecture were the firs appear on the field. In Germany the honour seem have been divided, but in our own country, excep regards the planning of garden cities and suburbs work has so far almost entirely devolved upon engineer. Architects, however. need not be in any perturbed, for, as the preparation of Town Plan schemes is gradually brought to a conclusion efforts will be gradually called into request.

The number of architects who have up till seriously studied Town Planning is comparat small, whilst the number who, without either sp training or experience, regard themselves as cap of undertaking such work is comparatively large.

The earliest efforts of architects who embarked upon 'own Planning schemes, more especially of those who irected their attention to the winning of competi- ons, resulted in the planning of urban suburbs n a scale so ambitious as to rival Washington and aris. The inherent growth and immobile condi- ons of the social structure were not appreciated. It ould seem that cities and sections of cities could be evised with the same disregard for inherent tradi- ons and with as great success as plans for houses estined for clients who hold peculiar or eccentric iews or who possess very advanced taste. This was ome half-dozen years ago; but since knowledge has rown and the attitude of the isolated professions wards Town Planning has somewhat changed, it now generally recognised that anyone who takes up e practice of Town Planning must first have acquired nowledge bought by experience, or must have under- one a special training entirely outside the particular ofession to which he may have the honour to belong.

S. D. A.

The London Labour Trouble.

ON Saturday last, the London Master Builders' Association issued a notice to each workman employed by its members (except to ose men whose unions are free from taint of sloyalty) demanding that, on Saturday next, nuary 24th, every man shall sign an under- king to work peacefully with non-unionists, hether these are employed by the principal ntractor or by a sub-contractor. Further, every orkman is asked to agree, over his signature, that if commits any breach of this undertaking he will bmit to a fine of twenty shillings, to be deducted from y wages which may be due to him. These demands e as drastic and as logical as the Association's imme- ately preceding step of repudiating the working-rule reements which sections of the men had been so ompt to break. Collective bargaining having badly oken down, the Association tries the effect of ignor- g the recalcitrant unions and treating directly with e units. Equally logical, and equally impracticable, the proposal of a penalty against striking in breach covenant. Failing compliance with the Associa- n's demand for a common guarantee fund, individual bility of forfeiture is to answer the same purpose. If ere is any absurdity in the position, the laugh is ainly against the men. They are responsible for siting the problem which the employers seem termined to work out to its logical conclusion. But ile the situation is certainly rather Gilbertian, it is mere laughing matter. The London Association, o throughout their history have been a fighting dy, are certainly in grim earnest, and it cannot be nied that they have, on the present occasion, a very bust grievance. That, in a round score of instances, men should have broken wantonly an agreement ich gave them substantial and generous concessions exasperating in the extreme, and is a just occasion righteous indignation. It is also, we take leave to ggest, an apt occasion for tolerance. In particular, hardly think it probable that due allowance has en made for the demoralising influence of insecurity tenure. An ever-present knowledge that he may e his job at an hour's notice must tend to undermine man's stability and steadiness, and to destroy his pect for the virtue and durability of agreements; d this may be a more potent factor in the trouble n has yet been adequately recognised. We com- nd it to the attention of the employers' executive; o, we are sure, will further take into account a ong presumption that the great bulk of the unionists men of principle, who strongly disapprove of the sdeeds of the more turbulent minority, and who may trusted to do their best to vindicate their own racter and to refurbish the somewhat tarnished utations of their unions, now that they are being awakened to a sense of their responsibilities and to the danger of allowing their officials to be thwarted and terrorised by a handful of truculent syndicalists. If the action of the employers has the effect of spurring the level-headed men to active support of their officials, good rather than harm may emerge from a crisis that is nevertheless full fraught with menace.

Garden Cities for Consumptives.

ON another page of this issue appears an illustrated article on cottage and tent sanatoria, which offer an interesting example of the broadening of ideas among the medical faculty in regard to the open-air treatment of tuberculosis. It would appear, however, from a pamphlet issued by Dr. Esslemont, the Medical Superintendent of the Home Sanatorium, Bournemouth, that the final solution of the problem is to be sought not in the sanatorium at all, but in the large colony on garden city lines. The pamphlet outlines a scheme for such a colony, and its author supports his main contention with some commonsense arguments. He points out that while sanatoria will always be required for very advanced cases, they are not adequate to the needs of the very much larger class who, though they have contracted the complaint, are still fit for a moderate amount of work. These latter generally spend three or six months in a sanatorium, whence they emerge sometimes completely cured, but far more often only partly restored to health and still capable of disseminating the disease among their fellows. If such patients are to get well and keep well they must live the open-air life for the rest of their days; and the self-contained garden city, specially constructed for this purpose, suggests itself to Dr. Esslemont as the best place to live it in, both from the standpoint of the patients, who could then resume the civic and other interests that make life worth living, and from that of the community, who would be freed from the risk of contamination. The architectural object in such a city would of course be to provide the maximum of light and air. Our existing garden cities are not, for the most part, backward in this respect; but we can well imagine that a house where these essentials would be insisted on to the utmost limit, would present problems of aspect, fenestration, and so forth that hardly come within the range of the average domestic architect, and would call forth the most ingenious talent in the profession.

Some Minor Matters in Planning.

TEMPORARY buildings, coal sheds, wood sheds, sheds for garden tools, bicycles, or perambulators, in the immediate neighbourhood of a private house are generally—and justly—labelled unsightly excrescences. But we continue to put up with them for the simple reason that, as regards small houses and cottages, at any rate, they too often supply accommodation for which little or no provision is made within the house itself. The absence of this provision from the majority of small houses was once a standing reproach to the speculative builder, but we are not at all sure that the average architect's cottage of to-day is not equally deficient. We have ourselves laid it down that some sort of covered accommodation for a bicycle is a *sine qua non* in any small house design, and we should like to see a similar hospitality extended to the other household requisites already mentioned; it is surely time that working architects frankly recognised that this kind of designing ought not to end with the elevations and with the planning of the principal rooms. Meanwhile it would appear that the mere speculative builder who plans his own houses enjoys some little advantage in this respect. Building with view to let, he has not been ashamed to profit by the outspoken comments of prospective tenants, whom he "personally conducts" over the premises, and has gained therefrom a fairly complete notion of modern household needs.

His work may be jerry-building of the worst type, but if he is clever (and liberal) in the disposition of cupboards and thinks of a "box" room he will amply atone, in the public mind, for much unscrupulousness and lack of taste. With the latter evils people will put up rather than surround themselves with the temporary structures which the inadequately equipped house renders necessary.

L.C.C. versus Building Societies.

THE scheme of the London County Council for enabling tenants on the Oak Common Estate at Hammersmith to become their own landlords on payment of a first instalment of £5 is another illustration of the truth that a public authority never does anything practical without having been shown the way to it by private enterprise. Certainly the Council have gone one better than any of the building societies that have been practising the purchase-by-instalment system for years; the first instalment of £5 is a lower figure than is ever likely to be popular with building societies, though we have seen an instalment of £10 held out as an inducement to would-be purchasers of £250 houses. We understand that at present the Council's scheme is limited to the estate at Hammersmith, but if it succeeds there, it will probably be extended to any other district affording the necessary facilities; unless, indeed, an outcry is raised that the Council is thereby approaching again the prohibited path of municipal trading, by entering upon an unfair competition with the building societies and with private owners who build to sell on easy terms.

Architect and Craftsman.

LECTURING at the Carpenters' Hall on "Building as a Creative Art," Mr. M. H. Baillie Scott urged the need of more practicality in the training of the architect. He should spend less time in the drawing office and more among bricks and mortar—to the end that architect and craftsman may be combined in one person, and a glorious era in British building result. In other words, we are to restore the mediæval guild system. Although we consider that Mr. Baillie Scott overstates his case, we agree with him to the extent of believing that a larger proportion of purely practical work in architectural training might have beneficial results, particularly as regards the improvement of that cottage building which he regards, not without reason, as the basis of a sound national architecture. But when he speaks lightly of the curriculum of the average architectural school, full of blemishes as this may be, he reminds us of the self-made and self-satisfied man of the world who objects to his son being taught Latin or Greek because a careful study of the methods of the London Stock Exchange would be of greater immediate utility to him. Very possibly, architectural training of to-day inclines too much towards the theoretic and artistic; on the other hand, its over-materialisation could hardly fail to produce, not the charming cottage of the lecturer's vision, but something worse than the bad that already exists among the good.

Town Planning and Railways.

THE revival in a reconstructed form of the Northern Junction Railway scheme, which was successfully opposed last year by the Hampstead Garden Suburb, brings into even sharper antagonism than before the differences in point of view existing between the town-planning idealist and the utilitarian. During the past year the town-planning idea has taken a firm hold of the national conscience, and it is no longer a question of the amenities of Hampstead or, as in the present case, of Hendon, Finchley, and Ealing, but of
the whole relationship between town-planners and ra
way companies. The case for the Northern Juncti
Railway has been argued at length, and its commerc
and military necessities have been debated
nauseam; what, however, thoughtful people have
decide is not whether this or that bill shall be allow
to pass, but whether there is any way of reconcili
the conflicting interests that seem likely to beco
more and more in evidence in the near future. It h
been urged that the town-planners should solve t
difficulty by taking railways into account and worki
them, as indispensable adjuncts, into their schem
But something more than this is required, if the dang
to the "amenities" of a residential district is to
mitigated or removed. Briefly, it is idle to talk abc
co-operation between the architect and the railw
engineer, until the companies are willing to recogni
and make concessions to, æsthetic consideratio
Admitting, as one must, that railways are frequen
necessary, we are still unable to see why hideousne
in constructive details should have to be reckon
among their many disadvantages. In the bridges, t
tunnel entrances, in the arches of a cutting, in t
fences that guard the permanent way, and elsewhe
there are opportunities for architectural treatme
which have been consistently ignored.

Working Sub-contractor and Workmen's Compensation

WHETHER, and in what circumstances, a wor
ing sub-contractor is, or is not, a workm
entitled to compensation under the Act, is
problem that has repeatedly come before the courts f
solution; and it is exceedingly likely to recur, becau
of the necessity for deciding each case on the mer
of disputed matters of fact. In the appeal of Barnes
Evans and Co., of which we give a special report
another part of the present issue, the issue depend
entirely on the ascertainment of the fact as to wheth
a working slater who undertook a slating sub-contra
was or was not a workman whose representatives we
entitled to compensation for his death from an accide
which occurred to him in the course of his employme
Barnes had agreed to do the work for a fixed sum a
to provide the necessary labour. Afterwards, findi
it difficult to get an efficient labourer, he asked t
builders, Messrs. Evans and Co., to find him one. Th
they did, but Barnes discharged this man and e
ployed another. Then ensued a complication whi
seems to have encouraged the belief that the con
tions were so altered as to warrant a claim under t
Workmen's Compensation Act. It was found nece
sary to expedite the work, and accordingly the builde
sent a slater and a labourer to help Barnes. A coun
court judge held that in consequence of this arrang
ment Barnes, at the time of his fatal accident, h
ceased to be a sub-contractor, and that therefore h
widow was entitled to compensation under the A
This view was not upheld in the Court of Appe
where it was held that the course taken by the builde
did not determine the sub-contract: that Barnes d
not thereby become the servant of Messrs. Evans, b
had maintained his independence as a sub-contract
It is a nice point, and the delicate equilibrium of t
issue is indicated by a casual observation made in t
course of the judgment—"that nothing was done b
Messrs. Evans and Co. *after the accident* which wou
go to show that the contract was put an end to." Und
the influence of an accident, emotional impulse
either side should be rigorously subdued and exclude
lest its manifestations prejudice any legal proceedin
that may arise; and the handling of the business
that particular stage of the case under notice may ser
as a model of wise, discreet and businesslike condu
Equally to be commended for imitation is the firm
generous refusal to ask for costs when they had won
the appeal.

HERE AND THERE.

IN the jaunt down Fleet Street which we commenced last week we got as far as No. 17. Continuing from this point, we come next door upon Barclay's Bank, by Mr. Arthur C. Blomfield, where we may note three little squirrels in the central window of the ground floor—a reminder of the fact that the banks all had their badges and signs in the old days. It is just the same with Hoare's Bank, an excellent composi- ion by Sir Robert Smirke, a little farther along on this ide of the street, where a gilded leathern bottle is to e seen in the fanlight.

And now that we are on the subject of signs let me raw upon Mr. Walter Thornbury for an old-time icture of the thoroughfare we are considering. He ays: "Fleet Street was rendered picturesque not nly by its many gable-ended houses adorned with uaint carvings and plaster stamped in patterns, but lso by the countless signs, gay with gilding, and ainted with strange devices, which hung above the hop-fronts. Heraldry exhausted all its stores to urnish emblems for different trades. Lions, blue and ed, falcons and dragons of all colours, alternated with eads of John the Baptist, flying pigs, and hogs in rmour. On a windy day these huge masses of painted imber creaked and waved overhead, to the terror of ervous pedestrians, nor were accidents by any means are. On the 2nd of December, 1718, a sign-board pposite Bride Lane, having loosened the brickwork y its weight and movement, suddenly gave way, fell, nd brought the house down with it, killing four perons, one of whom was Queen Anne's jeweller. It as not, however, till 1761 (in the reign of George II.) at these dangerous signboards were ordered to be laced flat against the walls of the houses." So that, ith all our taxis and motor-buses, we run no greater azard in going down Fleet Street than our forefathers id. Moreover, it must be remembered that in the ays of Dr. Johnson the street was cobbled over and ad no side pavements, a string of posts being the sole otection for the pedestrian. In the middle of the reet was an open gutter, from which the rumbling aches liberally scattered mud on those whom they ssed. We know, too, that sedan chairs were further pediments, and as choleric people were disposed to ht for the wall, Fleet Street offered every prospect of ely happenings on a wet day.

To resume, however, our architectural concerns. On e north side of the street, between Chancery Lane d Fetter Lane, there is the church of St. Dunstan-the-West. John Shaw was the architect of the isting building, which was consecrated in 1833, and e tower is said to be a copy of St. Helen's, York. is is one of those statements that get repeated and peated, like items in a cyclopædia, without verifican. But, not knowing St. Helen's, York, I cannot y whether this was the model that John Shaw set fore him or whether it was some other, such as ston "Stump." The former St. Dunstan's, the urch whose east wall was the furthest point which Great Fire reached on this side of Fleet Street, jected considerably into the thoroughfare, and the ilom booksellers' shops used to nestle round it. Now, turn, the church has been encroached upon, the urance office which bounds it on the west having en permitted, some years ago, to swallow up the forert to within a foot or so of the tower—a proceeding ich the Ecclesiastical Commissioners should be amed of: it is a pure piece of vandalism, ntenanced by a body who ought to be foremost in serving the amenities of churches.

Before leaving St. Dunstan's it is necessary to menn the figure of Queen Elizabeth that stands in the he over the vestry door. This is a fragment of the Lud-gate. The church acquired it in 1766, and lost later its amusing clock, which, with its little figures of giants who struck the bell, attracted sightseers of yesterday just as Gog and Magog and the great clock at Berne attract them to-day. St. Dunstan's clock was removed to the Marquis of Hertford's villa in Regent's Park, called "St. Dunstan's," where I believe it still is.

* * * *

Both sides of Fleet Street we can now pass without comment for some little distance. There is a new insurance building in front of Serjeants' Inn, where, as at the Piccadilly Hotel, a colonnade has been run across at the upper level, and many other rebuildings join company with it, the process of rebuilding Fleet Street being apparently an endless one. In strange contrast to all this new work is that survival of old times, the "Bolt-in-Tun," just below Bouverie Street. This must surely be one of the oldest relics of the Fleet Street which knew the "Bolt-in-Tun" as a familiar stop for the coaches. The London and North-Western Railway now use the place as a district office, but you can still see the old timber posts on either side of the passage that led to the yard of the inn.

The façades from here to the bottom of the street are even a sorrier collection than those we have already passed. The big newspapers do not set a good example. Their internal history is far more entertaining than their architectural exteriors, so that one finds more interest in recalling how the "Daily Telegraph" was started in 1855 as a single news-sheet costing 2d. than in studying its ponderous Victorian front. "The Standard," though more recent, is not a whit more exemplary, being a sort of Byzantine hybrid supported on a Scotch granite arch, and the "Daily Chronicle," on the opposite side of the street, gives us the architectural shivers. We look anxiously to right and left in the hope of lighting upon something a little better, but without finding it. The late Mr. John Belcher even disappoints us with his "Birmingham Post" building, and it is therefore to our great delight that the tower and spire of St. Bride's Church bursts upon the view. Flaxman was of opinion that it was "an ugly thing and better hid," so we may be sure he did not approve the scheme carried out about a hundred years ago under the direction of John Papworth, who was active enough to get the houses in front cleared away and a little place formed, leading up to the church. As he left it, the houses on either side were kept low, producing a very pleasant composition, with the tier on tier of Wren's stonework rising up to 230 ft. as a central feature, but the new buildings that have sprung up have taken no account of this, and as a result, the present arrangement is, like the rest of Fleet Street, chaotic.

* * * *

Very little now remains to be said of the façades. Messrs. Cook are at the bottom of the street, occupying a Frenchy building which has lately grown so big as to swallow up a little front which Mr. Collcutt once did, though in its later days it suffered the indignity of being obliterated by advertisements of Lockhart's Cocoa. An architect who was familiar with it furnishes me with this information about the façade. He says: "The building was formerly the showrooms of Collinson and Lock, for whom at that time Mr. Collcutt was designing furniture. The front was too good to pull down, but too hideous to keep standing, and so Collcutt determined to introduce a few strings and cornices in red rubbers, and to cover the panels in Portland cement. It was in the depth of winter, thirty years ago, that the work was begun. The scaffold was lined round with canvas, and braziers were kept continually burning behind the screens, night and day, to keep out the frost. A certain young artist—now gone to

America—named Wilberfoss, who at the time was designing wallpapers for Jefferys and other makers, undertook to 'do something' to the bald and unconvincing panels of cement, and so, with his own hands, he modelled that cement. When the whole had set and the braziers and the canvas screens were removed, London had become in a few weeks the possessor of as fine a piece of honest work, and as charming a London front, as under corresponding circumstances it is ever likely to possess."

* * * *

Ludgate Circus now confronts us. The Oldbourne Bridge across the Fleet is a memory only; the river that became a ditch now runs underground in a City sewer; the Memorial Hall of the Congregationalists, across the way, stands on the site of the Fleet Prison—burnt in the Great Fire of 1666, rebuilt, destroyed by the Gordon rioters in 1780, rebuilt, sold to the Corporation in 1844, and by them pulled down; the wood pavement on Ludgate Hill covers what was once a grassy slope with Lud-gate in the Roman wall. This is certainly a place of stirring memories, but the very negation of civic planning and architecture. There are two obelisks in the Circus, and with them we may conclude our survey, for they stand like pointers—the one (erected to John Wilkes in 1775) pointing backwards to the eighteenth century, when architecture took on pleasant forms and, incidentally, employed good lettering; the other (erected in 1833 to Robert Waithman) pointing forwards to the nineteenth century, when all the rich precedents of a former age were to be flung aside and a riot of bad architecture was to take its place. The comparison is not comforting, but it is instructive. UBIQUE.

"WHO'S WHO IN ARCHITECTURE."

IT is very gratifying to us to find that our new projected volume, "Who's Who in Architecture," is warmly received by the profession. In scores of letters which we have received the idea is heartily commended, while forms duly filled in with the necessary particulars continue to reach us by every post. Our readers evidently recognise, as we do, that "Who's Who in Architecture" will be a most interesting and valuable addition to the bookshelf. At the present time, while a few biographies of notable architects of the present day are available, there is nothing comprehensive at hand for ready reference. Our new volume will completely meet the existing deficiency, for it will embrace the whole profession. The perusal of the brief biographies will in itself be pleasant exercise, but the merit of the volume will not end at that, its complete list of architects in practice throughout the Kingdom giving it a value as a book of reference for everyone connected with architecture and building.

As explained in our preliminary announcement, we have circulated among architects a specially prepared folio form on which the desired particulars may be set out with facility, and hundreds of these forms, duly completed, have been returned to us. By the time this notice appears a large additional number will have reached us, but we would take occasion to remind those who have not already sent in their forms that it will be a great convenience to us if they will do so without delay, the volume being now in active process of compilation.

"Who's Who in Architecture" will be well bound in cloth, with gilt lettering, and, when published, the price will be 10s. 6d. nett; those, however, who now subscribe to it can secure a copy at the special reduced rate of 5s. 6d. nett, post free.

Any information concerning the volume, as well as forms to be filled in, and stamped addressed envelopes for their return to us, will be readily supplied on application to the Editor, "Who's Who in Architecture," Technical Journals, Ltd., Caxton House, Westminster.

THE PLATES.

The Students' Union, Liverpool.

IN our last week's issue we published three plates the Gilmour Hall, Students' Union, Liverpool—tl work of Professor C. H. Reilly—and gave a bri account of the building, which has been erected b Messrs. J. and G. Chappell, of Liverpool. The tw interior views that we now reproduce show the lobb and the entrance hall respectively. As will be see the architect is consistent in his use of the Doric Orde adapted with much nicety to the needs of the buildin It should be added that the whole of the fibrous plaste work in conjunction with the "stuc" or stone plaste work of the Gilmour Hall was carried out by Messr John Tanner and Son, of Westminster and Liverpool

Detail of Façade, Rue Richepance, Paris.

As an example of current French architecture, th façade has a good deal to recommend it. The deta is especially crisp. The horizontal rustication is somewhat over-emphatic feature; but the Class ornament on and between the supports to the balconi is tastefully conceived. The ironwork of the baluste is conventional, though far from unpleasing in design

Early Nineteenth-Century Architecture.

We publish two plates of country houses which hel to recall, what is sometimes apt to be forgotten, th directness and delicacy of much domestic architectu in the opening years of the nineteenth century. Th house which is now used as the Pentilly Estate Offi was built about 1830, and while suggesting straigh forwardness and solidity in treatment, retains a sens of grace and symmetrical proportions. The secon house, one of many that remain to remind us of th influx of army pensioners into Guernsey after th Napoleonic wars, illustrates the same qualities in greater degree. It is built of granite in rando courses. One may note the curiously colonial atm sphere given by the slender twin columns supportin the balcony, which, as in the other house, is carried th whole length of the façade. The beauty of the iro work pattern in the balustrade points to the existen of an excellent tradition in the trade firm that produce the work.

Pair of Cottages at Cricket St. Thomas, Somerset

These cottages, which cost about £800 for the pa were erected in the park of a country estate, to serve married quarters for a butler and a chauffeur. Th walls are built of local rubble, with cavity and bri lining up to first floor, and 11 in. cavity cement treate above; with plain tile roofing, and 2 in. hand-mac brick chimneys with Ham Hill stone caps. Include in the price were baths and hot-water heating coppe in the kitchen, and a good deal of fitment furnitu elsewhere. The architect was Mr. Clough William Ellis.

Rome Scholarship in Architecture.

The drawing we publish is an accomplished piece student's work, showing a good sense of design couple with draughtsmanship of a rare order. The deta between the Ionic columns of the second story admirably worked out. The Rome Scholarship rapidly justifying the sanguine belief in it as a stimul to good work.

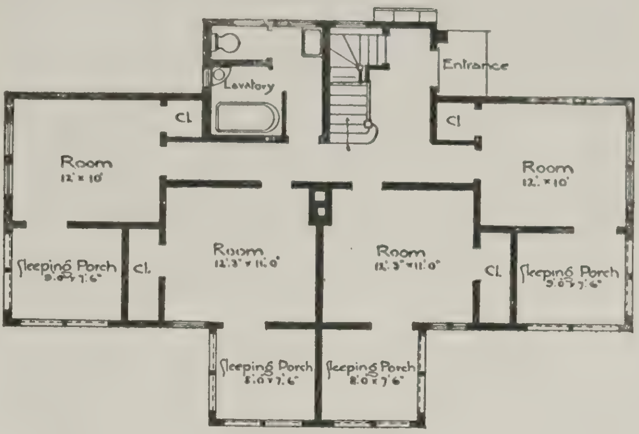
Working Drawing: Cardiff Technical Institute.

This working drawing shows the north-east angle the façade of the Cardiff Technical Institute. We pu lished a drawing of the colonnade to this building our issue of December 31st, 1913, when some partic lars were given of the building itself. The architec are Messrs. Ivor Jones and Percy Thomas, and th contractors Messrs. E. Turner and Sons, Limited.

SANATORIA COTTAGES AND "LIEGENHALLE."

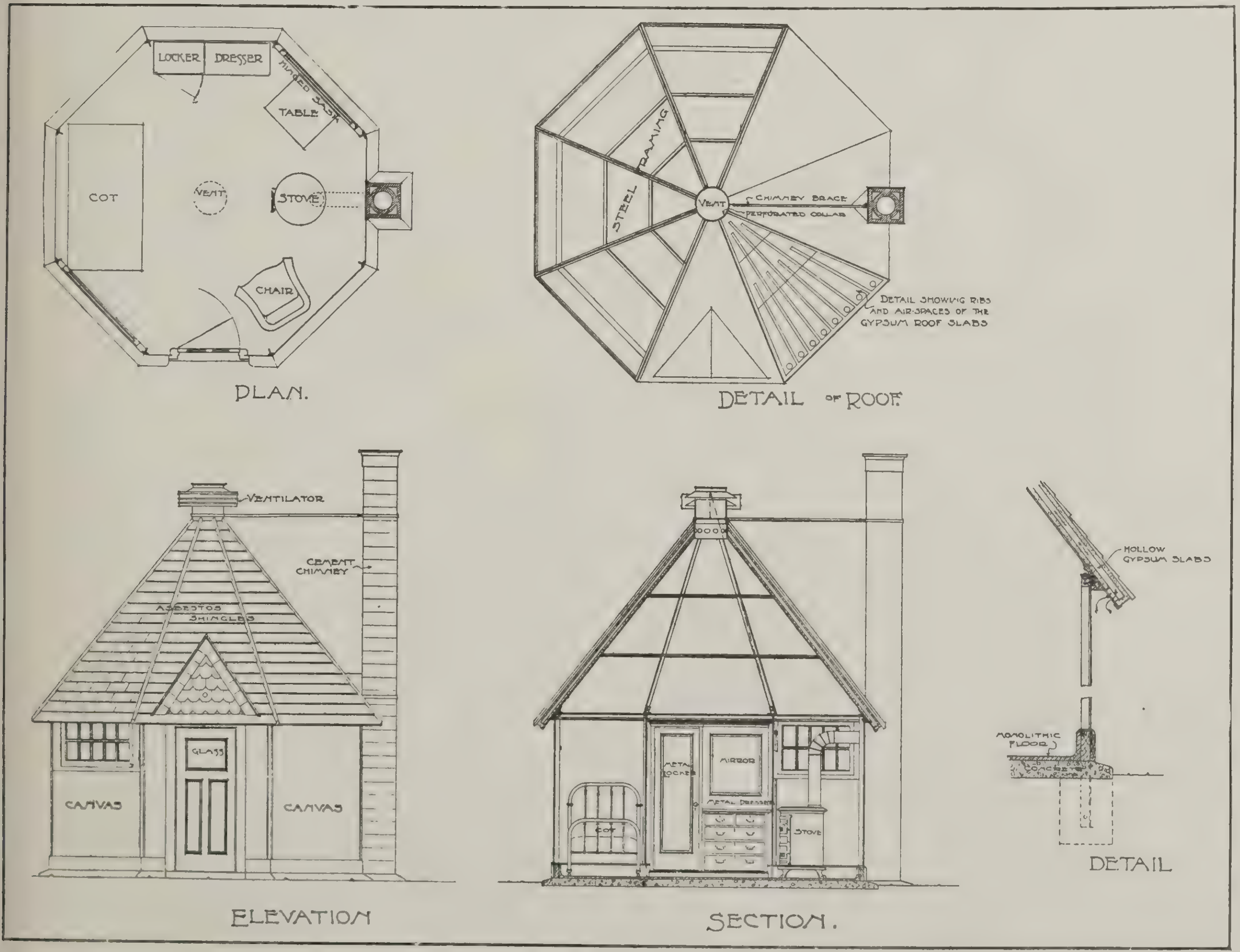
THE open-air treatment of consumption has called into existence a number of diverse opinions as to the type of buildings best adapted to the purpose of sanatoria. For many years the elaborately organised hospital with its wards and pavilions held the field, to the exclusion of all other types; but latterly the alternative system of a colony of cottages or tents has claimed a good deal of attention. From the medical profession the latter system has received notable support, directly and inferentially, Sir William Broadbent being among those who favoured a system of detached sleeping huts or châlets; and in certain well-known sanatoria in this country and America the addition to the hospital building of "sleeping porches" has effected a sort of compromise between the two systems. For those patients who desire a certain amount of privacy the cottage or hut plan offers undeniable advantages. It may, therefore, be of interest to describe the latter system in regard to its methods and working.

Since the effectiveness of the open-air treatment of tuberculosis has compelled the provision of sleeping porches in the larger hospitals, the sleeping porch is necessarily the starting-point in planning the cottage unit in the other system. Climatic conditions in certain ocalities would probably necessitate the connection of cottages by covered ways to the central administration building. Elsewhere, as in Colorado, this necessity is avoided by the geniality of the climate.



COTTAGE, CRAGMOR SANATORIUM, COLORADO.

The Cottage Sanatorium, of which we reproduce the ground floor plan, is really a compromise between the sanatorium on hospital lines and the plan of a central building with single hut or tent accommodation for patients. It consists of a central administration building with cottages for men and women placed on either side at moderate distances from the central building and from each other. The problem lay in determining the arrangement and number of patients to be accommodated in the cottage unit and to obtain sleeping porches with two open sides. Each cottage is two stories in height; the rooms have good direct light and are intended for dressing-rooms rather than bedrooms. The sleeping porches are not completely isolated; but should the coughing of one patient disturb another, the former can be transferred to one of



LIEGENHALLE, NORDRACH SANATORIUM, GERMANY.

the first-floor corner suites. The cottages are so placed as to cause the two open sides of each sleeping porch to face south and east and south and west, and the rooms behind the sleeping porches are well lighted, especially those at either end, which have south and east and south and west windows. The aspect of the cottage unit having been determined by the foregoing conditions, the placing of the units in their relation to each other has been governed by the following considerations: far enough apart so that the shadow of one will not strike the other; ample circulation of air around each cottage; clear views and privacy. The entrances to these cottages being at the back confines traffic to that side, and thus there is the desirable quiet in front of sleeping porches. Nurses' quarters and a dietary kitchen are provided with each group of five cottages.

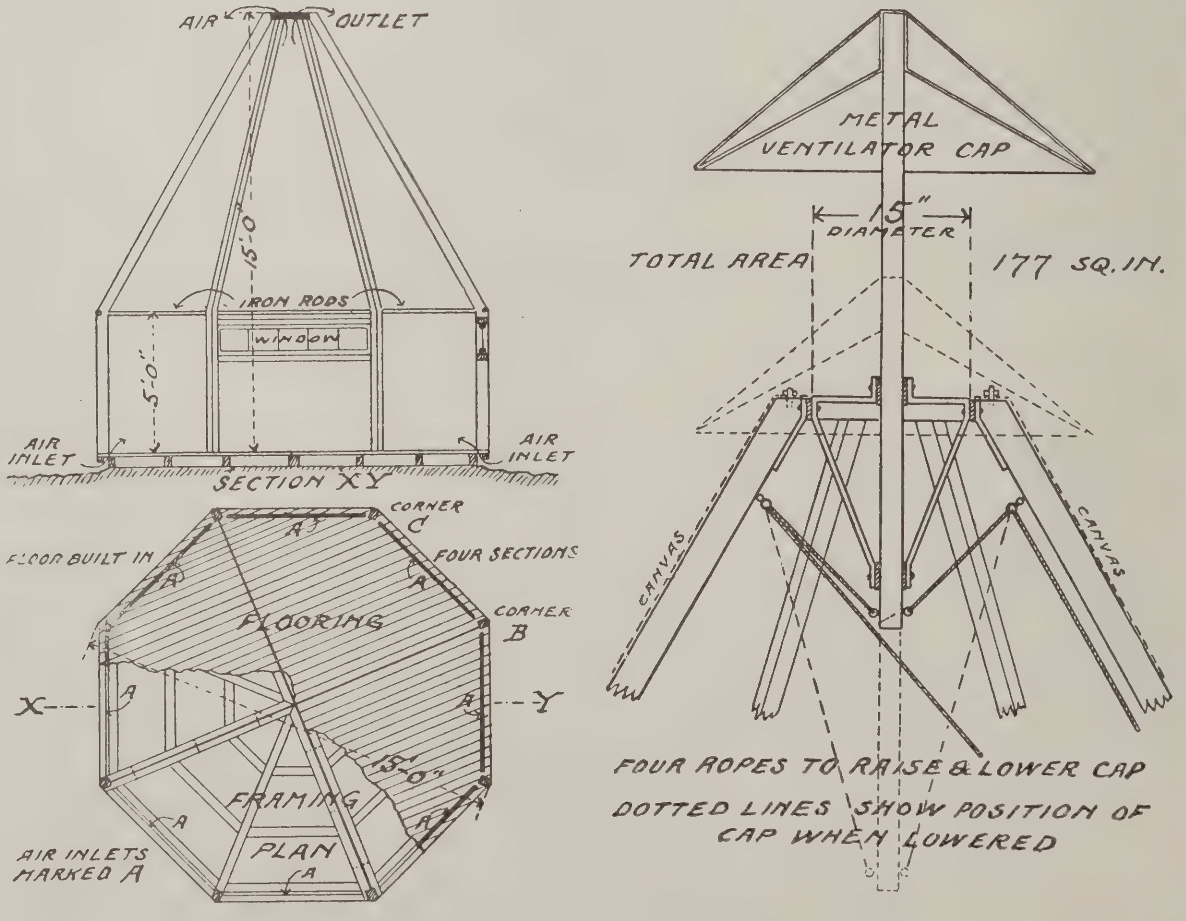
The Cottage Sanatorium is, however, at its best but little more than a compromise. The ideal way of obtaining the necessary conditions of shelter, combined with plenty of daylight and pure sun-warmed air, is the tent. A sanatorium, however, composed of tents has to face the problem of lavatory conveniences, heating, and administration, not to mention the special risks of fire. The best plan for laying out a sanatorium on the tent system is one that combines the use of tents with permanent buildings, such as that designed by Messrs. Maclaren and Thomas for an American institution of the kind. In this the tents are arranged in six groups or colonies, each group being laid out in U shape on plan, with what is termed a utility building placed in the hollow part of the same. Two shelters are provided for each colony, mainly for patients desiring to sit in the shade. The other buildings provided in the scheme consist of the administration building, main building, and reception hospital. The superintendent and doctors are accommodated in houses in close proximity. The power-house is placed as fa as possible from the lower end of the institution. A feature which is contemplated in the future is an infirmary for patients requiring constant attendance this will be placed at some considerable distance from the general group of buildings.

A brief outline of the method of administration will render more clear the type of plan adopted. The reception hospital is for new arrivals, and patient there await their turn to fill vacancies in the tents Each group of tents accommodates sixty patients, and each group is under the charge of a doctor whose quarters are in the utility building. The general supervision of the colonies is in charge of the medical superintendent, whose offices are in the administration building. In the utility buildings facilities are given for obtaining light nourishment prescribed for patient between the regular meals, which are served only in the dining-halls in the main building.

Utility Buildings.—On the ground floor are placed offices for the doctor in charge of a colony, a small kitchen and lunch-room, patients' bath- and toilet-rooms, two nurses' rooms with private bath, and a linen room. In the attic accommodation is provided for the man in charge of the grounds of a colony.

Administration Building.—The ground floor contains the offices of the medical superintendent, record-room, laboratory, pharmacy, accounting-room and vault. On the first floor are suites of bedrooms for the occasional use of the Board and a Board meeting-room.

Main Building.—On the ground floor are placed two dining-halls, each accommodating 180 patients and between the two are dining-rooms for doctors nurses, and visitors. The remainder of the floor is occupied by pantries, kitchens, storage-rooms, and servants' dining-rooms.



GARDINER TENT.

Reception Hospital.—On the ground floor this con-
ains four office-rooms for doctors, a record-room,
aboratory, incubator and throat-room, library, phar-
nacy, kitchen, pantry, and storage, and five patients'
ooms, opening on to a common sleeping porch, and
ath- and toilet-rooms. The first floor comprises fifteen
atients' rooms (all opening on to balconies or sleeping
orches), a diet kitchen, operating- and sterilising-
oom, and bath- and toilet-rooms.

Heating.—Steam-heating is proposed, on the
acuum system, and tunnels in which the mains and
ll other service lines are laid will connect the power-
ouse to all the buildings. In each tent will be placed
radiator.

Lighting.—Dynamos in the power-house will pro-
uce the electric light for the institution, the grounds,
nd the tents.

Cost.—The cost of the institution is approximately
stimated at £225 per patient.

Of course it is only possible to carry out the open-
r treatment satisfactorily in a well-constructed tent.
he ordinary type is not sufficient—there is not enough
entilation through the canvas itself to supply the
quired amount of fresh air. The Nordrach Tent,
hich we illustrate, has special ventilating features. It
octagonal in shape, with shingle roof, oiled floor and
rong army canvas on the sides. A galvanised
ationary ventilator, shaped rather like an umbrella,
s into the apex of the tent and can be opened or
osed by means of a damper controlled by a cord
stened usually to the head of the bed. There are
so two good-sized windows in each tent on opposite
des of the octagon. The furnishings are the same as
ould be used in a room of a house, but a wardrobe-
ashstand is built into the tent itself. The strongest
inds never make the least impression on the tents, as
eir octagonal shape renders it impossible for the wind
get a purchase upon them.

The second tent which we illustrate is thus
scribed by its inventor, Dr. C. F. Gardiner:

The tent is of dark-khaki twelve-ounce duck,
retched over an eight-sided framework of wood, with-
it any centre pole and without pegs and guyropes, so
at it stands firm, like a house. The floor is raised
ght inches from the ground, and is in sections so that
can be easily moved. The lower edge of the wall is
stened several inches below the floor and one inch
it from it all around. This is to insure at all times
inflow of air that is gradual and without draughts,
ice this inch space in a circular tent represents an
ea of 520 square inches, and the hole in the top for
erflowing air has an area of some 177 square inches.
this way the tent cannot be closed and is ventilated
tomatically and constantly. There are small shut-
rs so constructed that they can partially close the
ening from within the tent in case of very high
nds. The opening at the top of the tent is covered
a zinc cone, which can be controlled by pulleys and
pe within the tent, in stormy weather being drawn to
thin an inch of the tent roof. The heating is by a
ntral-draught circular stove, which burns either wood
coal and can be so regulated as to keep a good fire
thout care for ten hours. The stove is of such a size
thoroughly to warm the tent under any conditions,
d at the same time it is impossible to overheat the
or interfere with ventilation. The more heat used,
greater the displacement of heated air upward, and
nore rapid interchange of air at once occurs. As the
ated air can escape at the top, the fresh air can
vays enter at the bottom of tent. This is automatic
d is not under the control of the invalid. A small
ndow which does not open is used in these tents. It
placed horizontally and is 1 foot by 6 feet. The floor
ing about eight inches from the ground there is very
le fear of dampness.

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or opinions expressed by correspondents, who are asked to be brief, and to write on one side only of the paper.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

The Registration Question.

SIRS,—I was pleased to see that in a recent issue you drew attention to the provisions of the draft Registration Bill of the Society of Architects with regard to "Persons qualified to be registered."

Clause 19 of the Bill states that in addition to professional members of the R.I.B.A. and Society of Architects any person practising as an architect may, on signing a declaration to that effect, be registered.

This clause if carried into effect would, in my opinion, for some time defeat the true object of the Bill; as at present there are a number of men, some of them practising architecture in conjunction with numerous other trades and callings, who have very poor claim to the title of architect. If architects connected with the Institute and Society are to be herded with these under the title of, say, "Registered Architect," how is the client to pick out the sheep from the goats? A client employing the services of a "registered architect" would naturally expect that man to be well versed in his business, and to have had a suitable training; if he is incompetent discredit would naturally fall on the profession in general.

Your correspondent Mr. Winch suggests that practising architects should be enrolled as "registered architects," whilst anyone who in addition to this is qualified by examination should be entitled to style himself "Chartered Architect." This is sound as far as it goes, but as the object of the Bill is to guarantee that a man practising as an architect is well versed in the duties of his profession, I would suggest that a list should be prepared of all men now practising as architects, a period of, say, two years set apart for them to pass a qualifying exam., and those failing to satisfy the examiners at the end of this period excluded from the register until qualified.

Architects connected with the R.I.B.A. and Society should be exempt from the qualifying exam., and should be entitled to use their various "letters" in addition to the title of "Registered Architect."

The Registration Bill would then at once be beneficial both to the public and to the profession.

C. F. OVERY.

[A "qualifying examination" that must be in many instances a disqualifying examination, since it would deprive the plucked candidate of his means of livelihood, is hardly a practical proposition. In mere humanity, qualifying examinations should be imposed only on those who seek to enter the profession, not upon those who are already practising. For these latter, some scheme of proof and testimony must perforce suffice.—EDS. A. and B. J.]

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

The House in Soho.

SIRS,—With reference to the paragraph in your last issue relating to the threatened demolition of No. 75, Dean Street, it would seem as if there were little chance of saving this excellent example of Early Georgian work in its entirety. Might not an effort be made, however, to prevent the destruction at least of a few of its most interesting possessions?—the paintings in the hall, for instance. The latter, which are valuable in themselves, as well as being superb specimens of architectural decoration, are painted directly on the plaster, and there might be some difficulty in removing them; but surely the task is not, in these days, impossible.

ART LOVER.

THE CLASSIC TRADITION IN AMERICA.*

BY. A. E. RICHARDSON.

THE lines upon which American architecture was to develop had every connection with contemporary events in the Mother-land, with certain reservations preordained by distance, environment, and new conditions. During the period of early colonisation and for a considerable time after the separation from English rule, it is easy to perceive the main impulses at work shaping the local tradition in semblance of the main issue. We read of the English displacing the Dutch settler, of the prosperity of the Grand Colonial Period, of the shock of the War of Secession, of the war of 1812, of the rise of the United States to the rank of a world power. Through it all the English tradition is dominant. It is possible to go deeper into the question, to analyse that positive spirit of searching and invention which has imparted to American architecture its peculiar charm, or we can sound that remarkable and persistent strain of refinement which has enabled a comparatively new country to take a high place in the sphere of art. Our summing-up is brief: the reticent Anglo-Saxon character is reasserting itself to-day with renewed energy.

This desire for fine architecture for its own sake, of architecture suited to each peculiar expression—nobly ordered, irresistible in its appeal to the intellect, was characteristic of the eighteenth century in England; its spirit was communicated to America at a time when that country was young and impressionable. The colonising power carried into its new habitat the thought and culture of an established civilisation. For nearly three hundred years new conditions have been at work, modifying and altering the varying influences from the mother-country; millions from alien races have fused with the old stock, but still the dominant expression is English. The very conditions of the struggle to settle in a new land brought about a marked change in the system of imported architecture; at first stone forms were translated in terms of timber, and a curious phenomenon resulted—a degree of unparalleled refinement in building ensued which we to-day conveniently name Colonial. No other British Colony presents such tangible evidence of the value of sequence in tradition as that offered by the three stages of architectural evolution in America. To-day we are confronted with a further development based on what is acknowledged to be the indigenous American style. This recent growth, which is the product of the last decade, in its main tendencies aspires to the academic; it borrows freely from Italian and French models, but its sympathies are entirely with the examples of Civil architecture built by Englishmen who migrated to America a century ago.

The whole story of the Colonial tradition, of the rise of Civil architecture, and the enormous advance of modern American design, is to-day acting as a stimulating creed to the arts in Europe. It means to England precisely what the artistic activity of the archaic Greeks, who colonised Dorian Sicily, Magna Græcia, and the Ionian cities of Priene, Miletus, and Ephesus, meant to the culmination of Hellenistic art at Athens. America, with its unbounded resources, great commercial enterprise, and, latterly, a closer appreciation of the arts, has awakened in the mother-country a fuller desire to improve the art of building.

Let us examine a little more fully the principal events and changes in American architectural history. We can, however, only deal with these briefly.

The Evolution of American Architecture.

In the early beginnings of the tradition, when the newly arrived immigrants first erected their small houses, the scarcity of masons to work stone brought about the literal transference of stone forms to wood. The Pickering House at Salem, erected in 1649, is a case in point; this design reflects a Jacobean interest. The fact that wood was used at first encouraged an ingenious and rich simplicity of taste which reached its zenith during the great Colonial epoch of the second half of the eighteenth century. The simplicity and refinement of the buildings erected during that age, although anticipatory of the delicate style of the Adam brothers, very nearly approaches the same spirit of cultured taste. The buildings erected in New England were mostly of wood, the use of this material directly shaping the forms of Colonial architecture along the east coast and in the towns. The architectural details of contemporary English work were considerably modified by this general employment of wood. The eighteenth century brought with it a striving for architectural elegance between the years 1725-1775; the increased population and wealth along the east coast occasioned a wider advance in design. Church building was undertaken in brick and timber during the reign of Queen Anne and the first two Georges, modelled on the Church architecture of Sir Christopher Wren and James Gibbs. Such churches as the "Old South at Boston," Trinity at Newport, and St. Paul's at New York are representative examples. Christ Church, Philadelphia, built by Dr. Kearsley, the general composition of which recalls the work of Wren, and the steeple that of St. Martin's-in-the-Fields by Gibbs, is remarkable, considering its remoteness from the centre of taste, London. If we search for further material in this connection innumerable evidence abounds scattered through New England, Virginia, Maryland, and the Middle States. It should be noted that during the early days of the Colonial epoch, trained architects, such as flourished in England, were practically unknown in America. Stonemasons, carpenters, and bricklayers, with well-thumbed copies of Batty Langley's book, doctors, and lawyers with Isaac Ware's complete "Body of Architecture," and others armed with "Carpenters' Jewels" and "Builders' Guides," ministered to the architectural needs of the community. There resulted a complete departure from the Classic precision of English work, but the gain in vivacity of expression more than atoned for the lack of observance of orthodox methods. It appears that the cultured requirements of the old Colonial aristocracy in many instances demanded the importation of English joinery. At this period little or no architecture of Civic pretension was in being, mainly accountable by the fact that the Crown grants for public purposes were insufficient, and also that the development of the Colony was in an elementary stage From the fine brick manor-houses of Mary land and Virginia, with their extensiv grounds and wrought-iron gates, followin the great English mansions, the history o the Colonial aristocracy can be read. Sucl buildings as Westover, built in 1737, o Carters Grove in Virginia, and the Har wood and Hammond houses at Annapolis are worthy examples. We must not forge Longfellow's house, "Craigie," built i 1757. But by far the most interesting ex ample is that built for Captain McPhœdris at Portsmouth, New Hampshire, in 1723 This structure follows closely the design o Eagle House at Mitcham; the bricks wer imported from England. Indeed, at thi period, bricks were carried to America b the shipload from the Netherlands and th mother-country. The cities of Phila delphia and New York and other of th smaller towns of the Middle States afforde further evidence of architectural activi during the zenith of the Colonial period The Morris house in Philadelphia is of type encountered in almost every Englis county town. It should not be forgotte that the importation of English furnitur by the shipload during the eighteenth cen tury, and especially the finer specimens i the taste of Chippendale, Adam, an Sheraton influenced architectural deta very considerably. I had almost omitte to include the most original and representa tive of Colonial examples, Mount Verno in the Potomac, the home of George Wash ington. This rarely beautiful house, wit its characteristic pillared piazza, woode balustrading, and elegant cupolette, speak strongly for Colonial achievement. A previously mentioned, the Colonial perio is not remarkable for buildings of monu mental scale. The building of churche alone gave scope to the Colonists, an such public structures as were require were inexpensive and modest examples good taste. The State House at Bosto and the Faneuil Hall, the Town Hall Newport, and Independence Hall at Phila delphia, the first American Civic centre are well known.

Between the period of the war of Sece sion and the later war of 1812, Monu mental architecture was developed to e press the changed conditions of self-govern ment and officialdom. The majority the buildings erected at this juncture in th natural history were for purposes of Sta and National Administration. Englar still proved the store-house whence th architectural inspiration poured, althoug young America's sympathies for the sty Louis Seize is discernible. The Old Ci Hall, New York, by McComb and Mang in 1803-12 is proof of this transitory sym pathy. At this point we must termina our general conspectus of the tradition favour of a brief *résumé* of the lives of th architects who aided the development monumental architecture. The names Dr. Thornton, Hoban, Hadfield, Latrob Strickland, Mills, Haviland, Bullfincl Parris of Boston, President Jefferso Isaiah Rogers, Ithiel Town, and Thoma Walter rank among the pioneers of th Formal Classic.

The State Capitol, Washington.

On July 16th, 1790, the capital of th United States of America was transferr from Philadelphia to Washington, and new State Capitol was decided to erected. The celebrated L'Enfant pr red his grand plan for the lay-out of the y, which is only just being realised in entirety. Dr. William Thornton, an genious but wrong-headed physician, pared the original plan. Soon after orge Hadfield, a young Englishman, is invited to continue the work. Hoban, Irish carpenter, and Blagden, an Eng- h stonemason, also appear to have been erested in the scheme, but until Latrobe, pupil of S. P. Cockerell, migrated to herica, the master mind for the comple- n of the structure was lacking. Walter ried out extensive additions, including dome, between the years 1851-65. But ween the period of Latrobe's and alter's directorship, Bullfinch was em- yed; his work appears to have centred out the Rotunda.

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* The first part of the tenth of a series of lectures on "The Work of the English Architects of the Eighteenth Century and the Neo-Classic School of the Nineteenth Century," given on Thursday evenings at University College, Gower Street.

Robert Mills.

Robert Mills became a pupil of Hoban d practised as an architect about the ne time that President Jefferson was ilding the University buildings in Vir- nia. The President lent to Mills some his architectural books, and Mills ap- rs to have aided Jefferson in preparing ns for the President's proposed house Monticello; the details were designed Jefferson. After practising for several rs, Mills entered the office of Latrobe a pupil, and studied engineering, and at ater date erected the Court House at chmond. Mills was one of the pioneers o projected railways on the continent America. He died in 1855.

Benjamin Latrobe.

Benjamin Latrobe, an Englishman, was n in 1762. He entered the office of P. Cockerell, a fact commented on by fessor Cockerell when referring to the ign of the Capitol at Washington. robe appears to have enjoyed a good al practice in Sussex, but on the death his wife he migrated to the estate of an cle living near Philadelphia. Soon er settling in the United States Benja- a Latrobe was appointed engineer Virginia and built the Bank of ansylvania—this he considered to be best work. Latrobe, in his capa- of engineer, improved the de- ces and lighthouses on the east coast America. Removing to Washington, he appointed Surveyor of Public Works he United States, and finished the north g of the Capitol. Latrobe afterwards npleted the cathedral and exchange at timore. His son, B. H. Latrobe, also ctised as an architect. Strickland be- ne a pupil and follower of Benjamin robe and attained prominence as an hitect.

George Hadfield.

t this point we must consider the career another Englishman, George Hadfield. ladfield in 1784 received the first gold lal for the travelling studentship at the al Academy Schools. With Signor onna, in 1791, he made measured draw- of the Temple at Palestrina, near ne (these are now at the Royal Insti- of British Architects), and in 1795 he ibited drawings of the Temple of Mars of Jupiter Tonans. Colonel Trum- , an American, while on a visit to don, selected George Hadfield, under authority of the commissioners, for ng out the City of Washington, to erintend the building of the Capitol, but account of a dispute between the archi- and the commissioner Hadfield left public employment. His works in- le the design of the public offices, the Hall, Custis's mansion, Commodore ter's house, and the United States k. Hadfield died in 1826. Charles Bullfinch was appointed architect to the Capitol on the resignation of Latrobe in 1818; he erected the Rotunda, improved the design of the east front, and practically finished the building.

Other American Architects.

John Haviland, 1793-1852, an Englishman, born at Taunton, in Somersetshire, studied under James Elmes. He journeyed to Russia and became acquainted with the American authorities, who invited him to America. In 1816 he left for the States and there designed the numerous prisons in America on the radiating principle, which at a later period Sir Charles Barry boldly adopted in his design for the Pentonville Prison.

A. Parris, of Boston, 1780-1852, practised largely as an engineer. He built the markets and court houses and other public structures in the former city.

James Hoban was responsible for the design of the White House, a building of freestone, yearly painted white. This structure was built in 1819 and has been much restored.

Thomas Walter, 1804, was a native of Philadelphia. Principal works:

1831—Designed the county prison, Philadelphia. 1833-37—Designed the Guard College (one of the finest Classic structures in America). 1838—Visited Italy to study for that building. 1851-65—The extensive addition to the Capitol (the dome was designed in 1865). 1864—Designed the new Treasury building. Walter was one of the founders of the American Institute of Architects.

Ithiel Town (1784-1844).—Practised in Connecticut in 1829. He took into partnership A. J. Davis. In 1829 he designed the State Capitol and Episcopal Church at Newhaven, and also carried out the City Hall at Hartford, Conn., and several important works in New York, the Customs House, and United States Treasury, and other works too numerous to mention. He was a corresponding member of the Royal Institute of British Architects. Many of his drawings are in the Institute Library.

Such works as the Merchants' Exchange, New York, 1841, and the Custom House at Boston, by Isaiah Rogers, are among other important undertakings of the period.

It is worthy of remark that the architectural development characteristic of English architects during the first half of the nineteenth century should have had such a remarkable effect on the architecture of America. The requirements of that time in America for public structures were of such a character as to demand a monumental quality, and it is significant that the most recently erected Classic structures should in a measure revert in type to the earlier buildings of the tradition. The period from 1850 onward produced such giants as Hunt and Richardson, but progress was not general until the genius of McKim again elevated American architecture to the level of the Academic platform. We could write folios on the modern development of Classic architecture in America, mentioning the names of several firms of world-wide prominence. But for the English-speaking race, the name of one firm only is of consequence—Messrs. McKim, Mead, and White. A study of the work of this celebrated firm of modern architects will form the second part of this lecture.

The Future Development of Classic Architecture in England.

To estimate rightly the future development of architecture, except through the media of current events, presents many difficulties. It is only possible to hint vaguely at what may reasonably be conjectured to result from the activities of to-day. The progress of architecture records the intellectual stamina of the people in a way that nothing else can, and there is every indication in the spirit of the present age of a desire to further academic principles and banish provincialities from the design of buildings. At present, it must be confessed, we are a long way behind the best of America's achievements, and we are outclassed by the French in their handling of plan problems. Our own tradition of Classic is falsely rendered and but little appreciated, few understanding that the spirit of the tradition alone need be considered, and not a base caricaturing of its finest models. We are beginning to enlarge our artistic horizon by studying the Classical masterpieces of every country, not with a view of exploiting the historical and modern side, but with the greater ambition to emulate and to excel those masterpieces which have aroused our cupidity. It is also becoming more apparent that mere picturesqueness or prettiness of effect is not the sole attribute of architectural expression; the laws of form, composition, character, and appropriateness need to be fully considered. The chaos of the last quarter of a century is being dispelled, and a way out of the architectural maze is lit by the old Classic truth. In a word, we have considerably advanced since the days of the last century in criticism, if not in achievement. We are beginning to approach our architecture from the Classic standpoint in the fullest meaning of the term, to view dissimilar problems of design with that disinterested attachment which alone conduces to the making of fine architecture, to reason and apportion our buildings in sympathetic consonance, to dismiss meretricious and popular architecture, and elevate intellectual architecture in the public estimation.

The possibilities attending architectural development from an observance of the foregoing theory are illimitable. If we ignore the convenient signposts of architectural literature which are introduced to divide a sustained movement into groups, and regard the whole range of architecture as a living and organic art, then, and then only, shall we be the better enabled to employ the symbols in use in our own time and fit them to specified requirements.

To quote Professor Cockerell: "The study of the beauties and defects of celebrated buildings should be the aim of the scholarly architect; this was the confirmation of theory and led to that knowledge of form and combination which makes the accomplished architect. No man invented an order or a series of mouldings; these he accepts from the greatest and most reputed masters' works who have preceded him; he stores designs, books, and portfolios, and prides himself like the lawyer on his precedents and authorities. Absolute invention he never proposes to himself for a moment, but by a large study of history and examples he is enabled to detect the petty prejudices of schools, to emancipate himself from the trammels of nationality and fashion, and to regard the works of all times and countries as subject to his own use, so far as they may be conformable to strength, convenience, and beauty."

To this valuable extract from one of the professor's lectures must be added a word with regard to the faculty of criticism. The critical power is of much lower rank than the creative, but it is none the less important. The merciless criticism to which the work of the Greek architects was submitted resulted in the maintenance of a high standard of perfection. If constructive criticism were to be more freely outspoken in this country, I venture to say that due regard would be paid to the elimination of such superfluous trappings and tawdry ornamentations as disfigure the majority of modern buildings. I refer more particularly to those cart-loads of rubbish, broken pediments, cartouches of the crustacean order, grotesque masks, and bunches of exotic vegetables which have no direct argument in the embellishment of a structure.

I could pillory scores of buildings which masquerade under the title of Classic; they are not even pseudo-Classic. But it is satisfactory to note that this slipshod building manifestation is meeting with the opprobrium it so richly deserves.

The future is full of promise.

THE PROBLEM OF DAYLIGHT ILLUMINATION.[*]

BY PERCY J. WALDRAM, F.S.I.

The illumination of buildings by natural light, as obtained by forming openings in the walls and ceilings of rooms, is an operation which so materially influences the structure and the subsequent utility and value of all buildings, to say nothing of the architectural and other amenities, that one is rather staggered to find that practically no rules exist which determine what width height, and arrangement of glass area, will afford adequate illumination for any given size of room. Still more strange is it to find no recognised criterion in existence as to what is adequate natural illumination for any given purpose, such, for instance, as a school, a library, a dwelling-house, an office, a retail shop, or a workshop.

By means of vertical windows we admit to our rooms a small (an extremely small) proportion of the illumination enjoyed outdoors, but what that proportion should be for any specific purpose has yet to be defined. When we come to consider the matter we find that the daylight source varies from month to month and from hour to hour on normal days by several hundreds per cent., whilst on many days it will vary by 50 per cent. to 100 per cent. in the course of a few minutes. After an exhaustive discussion of the main points of the problem, Mr. Waldram dealt with the data still required for the solution of problems of daylight illumination.

(1) *Minimum Illumination.*

Photometric data are needed to determine the value in foot-candles of minimum natural illumination required by average persons. It naturally varies for different purposes.

(2) *Minimum Ratio of Inside to Outside Illumination.*

Some years ago the writer suggested that owing to the large and often rapid fluctuations of daylight, the only exact photometric standard one could take was the ratio of the brightness of the zenith sky to the inside light; and that the only standard, without instruments, was the inside illumination enjoyed at sunrise and sunset on clear winter days, at which times the zenith sky is of at least approximately similar brilliance. This is really a very low criterion, the brightness of zenith blue sky being then only about 100 foot-candles in round figures. It is seldom darker than this between sunrise and sunset and is generally much brighter even on wet days in winter in towns. Between sunset and sunrise or when the sky is, in abnormal weather, darker than 100 foot-candles, it would appear to be unreasonable to expect any room to be lit by daylight. It must be noted that the light at sunrise or sunset with a clear sky is increasing or decreasing rapidly. It would not be correct to make such a test at, say, Plymouth without allowing for the fact that the sun there rises and sets sixteen minutes later than the calendar time owing to 4 deg. of west longitude. Any test should of course be made at sunrise in a room facing west and at sunset in rooms facing east.

For offices and domestic apartments the following ratios were suggested, viz.: That the requirements of ordinary comfort cannot be said to be infringed at any point where it was possible to read at sunrise and sunset on a clear winter day. This is equivalent to a ratio of 0.1 per cent. (1/1000) of the light derived from a small portion of the zenith sky, 0.2 per cent. of the total light from an unrestricted full hemisphere of sky of the same brightness, such as would be observed on a white card placed on a roof under a uniformly grey sky, and 0.4 per cent. of the illumination falling on a white card on the window-sill with a free horizon.

For schools it would appear that the desirable minimum is somewhat in the neighbourhood of 2½ times as much as in offices, viz.: that the darkest desk should receive 2½ thousandths (0.25 per cent.) of the zenith light, 0.5 per cent. of the roof light, or 1 per cent. of the light on the window-sill with a free horizon.

This is equivalent to saying that at sunrise or sunset in a clear winter sky, or at other times when the sky has an apparent brightness of roughly 100 foot-candles, the worst part of an office should receive a minimum of one-tenth of a foot-candle and the worst desk in a school one-fourth of a foot-candle.

Dr. Bishop Harman has suggested nine foot-candles as a minimum daylight illumination. But this is probably for young children occupying dark places in a schoolroom with very light walls. In ordinary rooms most people find it possible to read fine print under a daylight illumination as low as one-tenth of a foot-candle.

(3) *Relative Lighting Value of Different Elements of Sky.*

The author suggests that these important and even fundamental data can be most easily obtained by placing a large spherical wire cage outside the windows of different model rooms and ascertaining the effect upon any given part of the interior produced by blocking out alternate angular divisions of sky. Possibly the relative values thus found might be identical for all ordinary conditions, possibly certain elements might be more valuable in some cases than in others; but even in the unlikely event of a number of different sets of ratios being found to be necessary for different conditions of window height and width to depth and width of room, they could easily be printed in the different angular squares of similar diagrams on tracing paper, the appropriate tracing selected and placed over such a diagram as one that was exhibited by the author, and the true value of the actual sky lost and retained in any case could be at once computed.

Only when we really know the different lighting values of different elements of sky can we determine what degree of obstruction will affect any user of given premises. The determination of this obviously affec huge sums, not only of private expenditur but also of public funds, as in the case schools, where it is often necessary to dete mine whether old buildings shall continu whether they can be improved or must rebuilt on a new site, and whether th may be extended on the same site to co with the needs of growing districts.

RELATIVE VALUES OF WINDOW SPACE DIFFERENT POSITIONS.

The collation of sufficient data to dete mine this problem from actual roo would be a stupendous task, and it is i deed fortunate that the daylight conditio of rooms are exactly repeated in sca models in which the effect of different a rangement of window space, wall surface and sky obstruction can be studied at minimum expense. It is also more th probable that an artificial sky could be r produced by a hemisphere of cotton wo on a wire framework which would give t some photometric readings under artific light as a uniformly grey sky, and th materially reduce the extent of expe mental labour, which might otherwise so tedious that comprehensive resu would be almost prohibitive.

The data at present available gives u form indications that for table or desk ill mination a vertical window can only safely called upon to light a depth of roo equal to twice the height of the top of t glass from the table or desk height, viz the space lying below a plane which for an angle of 26½ deg. with the horizont from the top of the glass. This, of cours is only in accordance with the ordina proportions of well-designed rooms.

Taking the table height at 3 ft., such rule would work out as follows:—

Height of Top of Glass above Floor. Feet.	Width of Roo Lighted. Feet.
9	12
10	14
11	16
12	18

For schools an angle of 30 deg. would a pear to be preferable.

For windows with northern aspects, also appears that within these horizont limits of the reasonable range of a windo sky obstruction generally makes very lit difference, if any, up to about 60 deg. wi the horizontal, measured upwards fr the sill; but in portions of a room beyo the proper range of a window the lig drops so rapidly that they are sensi dark by comparison, and actually so dull weather even with a free horizon.

Exact data on this point can be obtain both from experiments on models and noting the effect of lowering dark blinds any room.

With regard to the proper width of wi dow for a given width of room and the re tive value of lateral sky for lateral lig ing, the writer has as yet made but f observations.

THE VALUE OF LIGHT REFLECTED FR WALLS AND CEILINGS.

With regard to this important point, amount of experimental data available also very meagre. Tests of the daylig illuminations on a card placed at differe parts of rooms first when unobstructed a then when shaded with a small card wh just blocks out direct light from the wi dow glass and leaves only the reflect light tend to show, as would be expecte that at and beyond the "effective rang of a window, light reflected from the wa and ceilings, especially the latter, is much larger proportion of the total lig ilable than it is in positions nearer to window, although it is naturally greater e. The writer has not, however, had to make sufficiently numerous tests on lel rooms papered in different colours e able to give any definite opinion as he necessary coefficient of reflection in ls and ceiling paper which is essential eeping any part of a given room up to ven standard.

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[*] Extracts from a paper read before the Illuminating Engineering Society, December 16, 1913.

ITIONAL ARTIFICIAL LIGHT INVOLVED LOWERING THE DAYLIGHT ILLUMINA- ON OF ROOMS BELOW A GIVEN TANDARD.

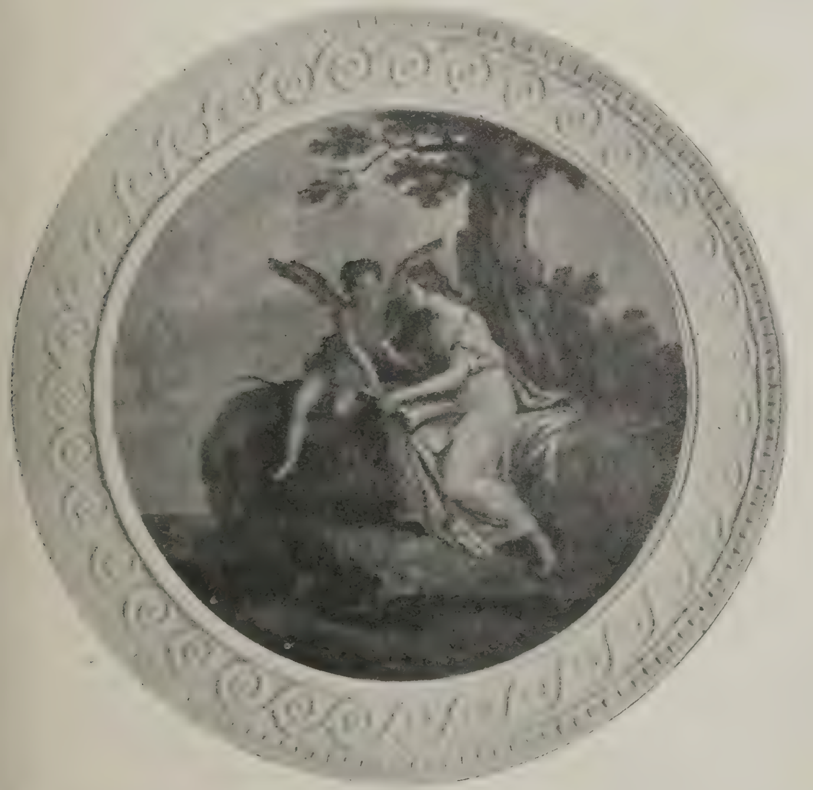
hen we are in possession of large-scale charts showing the average daily ation of daylight it is a comparatively le operation to state the average daily ber of minutes over which artificial t is required to maintain any given imum daylight illumination at any t in a room, provided we know or can sure the proportion of the outside light yed by that point. For example, if a er at a table requires artificial light n the natural illumination falls below foot-candle and the table receives thousandth of the outside light, then minution of 10 per cent., whether it be ed by dark walls or ceilings, glass, obscured window heads, or raising of surrounding buildings, in- es extra consumption of artificial light y morning and evening during the ave- time which the outside light takes to from 1000 to 1111 foot-candles. If average works out to twelve minutes the year, then the total average loss nrise and sunset is

$$\frac{\times \quad 365}{60} = 146 \text{ hours per annum.}$$

e actual loss for most purposes is, of se, very seldom experienced at more 300 sunsets per year, or sixty hours annum, and is frequently less than Taking the area lit by an average ow as equivalent to that lit by a watt lamp, then only three units of ricity would be involved. It is obvious that any such computation must generally work out at a very insignificant annual sum, and the plaintiff in an ancient light case would seldom be content to value in such terms the loss to his amenities. On the other hand, he generally anticipates that any prospective loss is going to be much greater, and more material than it really is.

SCHOOL LIGHTING.

The general treatment of this wide subject left the author but little time in which to deal with the special branch of school lighting, upon which an eminent architect only a few years ago stated that nothing remained to be said. Yet a committee of this Society, who are extremely enthusiastic and energetic, after having been at work for nearly a year, are still compelled to devote most of their time to the devising of labour-saving systems by which to reduce the great mass of work which still lies ahead of them. Many of their problems have already been indicated, but in addition they have to solve questions relating to unilateral and bilateral lighting, the effect of borrowed lights, the maximum variations between the lighting of various desks, the cure of badly lit existing schools, and the effect of the standing regulations of the Board of Education. Let it be said at once that the latter are in many ways most excellent, and the lighting which they secure in new schools is often all that could be desired. But they do not recognise, however, in their sweeping denunciation of skylights, that, in spite of the danger of leaking, these are of enormous lighting value, and can, and do, form a most valuable means of curing at slight expense defects in lighting quite sufficiently atrocious to demand the closing of a school. The regulations also do not differentiate between skylights and lanterns or high dormers; and the emphatic denunciation of front lights is also, to say the least, open to question, at least in cases where the sill is fairly high and the aspect is not sunny. Most of us work facing a window when we can do so.



ILING PAINTING BY ANGELICA KAUFFMANN, No. 3, ADELPHI TERRACE, LONDON.

GEORGIAN INTERIOR DECORATION.

At a time when so much interest is being evinced in the interior decoration of the houses of the eighteenth century in this country, which delightful work passes current under the generic term of "Georgian," the articles and illustrations which have appeared in recent issues of the "Architectural Review" are particularly acceptable. Since the "Review" has taken a new and larger form, its plates have quite eclipsed anything published in any other periodical. This is especially well shown by the January issue, which contains several striking plates devoted to painted decoration in England. As photographs they are very remarkable, while the high intrinsic interest of the work renders the plates immediately attractive. There is one plate of special excellence, showing the wonderful ceiling in the front drawing-room at No. 44, Berkeley Square. The interior of this house is a very sumptuous example of the work of William Kent, dating from the middle years of the eighteenth century. The ceiling in question, divided into "compartments" by rich plasterwork, modelled and gilded, is painted with classical subjects *en grisaille*, upon a background alternately of blue and red. This rich painted decoration is attributed to Zucchi by reliable authorities, though it is difficult to conceive that its execution was not contemporaneous with the work of Kent, so perfect is the harmony, and so fine the sympathy, between the decorative architecture, the painting, and the gilding. Zucchi, it may be recalled, was a Venetian. He was one of the party who accompanied Adam and Clérisseau in their travels through Italy and Dalmatia. In 1766 he was invited to England and was actively engaged from that year to 1781 in decorating many of the great houses designed or embellished by the celebrated brothers, Robert and James Adam.

Of the work of that other artist, Angelica Kauffmann, who did so much in conjunction with Robert Adams, there is a splendid example on the ceiling of the first floor of No. 3, Adelphi Terrace, the circular painting in the centre of which we illustrate below. Angelica Kauffmann came to England in 1765, already famous amongst the great English patrons who thronged the salons and studios of Rome, and was immediately besieged with commissions, principally, at this stage of her career, for portraits and easel-paintings. "She shared," writes a contemporary, "with hoops of extra magnitude, toupées of superabundant floweriness, shoe-heels of vividest scarlet, and china monsters of superlative ugliness, the privilege of being the rage," and her perfect instinct for the "sentiment of the antique," found, at this propitious moment, unlimited opportunity.

Angelica's romantic history has formed the theme of several novels, in French and in English. Under the delusion that she was making a splendid match, she married an adventurer who posed as a Swedish count, but who turned out to be his lordship's lacquey: with a wife and "encumbrances."

In the same issue of the "Review" there is a full account, with large illustrations, of the Villa Pisani, Strà—the most important of all those little palaces which were built on the banks of the Brenta, between Venice and Padua.

Illustrated articles dealing with the interior of the Palais de Justice, Paris, and with Christ Church, Spitalfields, are also included in what is a very notable issue.

BOOK NOTICES.

Cheap Cottages and Small Houses.

Mr. J. Gordon Allen's book on "The Cheap Cottage and Small House" having come to a second edition is yet another proof of the increased attention that is being given to a subject that, but a few years ago, was almost scandalously neglected. Among the hundred or so of designs contained in the book there are many that embody the principles and details upon which the author insists in his admirably clear and common-sense discussion of the problem in almost all its phases, and he has, in fact, produced a manual that, with its close attention to the practical details of construction, its definite information as to costs, its comparison of methods and materials, and its steady endeavour to show that comeliness and convenience are not incompatible with economy, should be of considerable assistance to the architect as well as to the prospective building owner.

"The Cheap Cottage and Small House." A Manual of Economical Building. By J. Gordon Allen, A.R.I.B.A., M.S.E. With over 100 illustrations. Second edition. Pages xii. + 166, 10 ins. by 6¼ ins., price 1s. 6d. paper, 2s. 6d. cloth. Letchworth: Garden City Press, Ltd.

A Manual of Cement Testing.

There is a growing feeling among those who use cement for large and important works that, great as are the scientific refinements in its manufacture, which have made it an almost perfect product, there remains, nevertheless, a necessity for subjecting it, immediately before use, to the most rigidly exacting tests, not because there is any reason to suppose that the manufacturers' assurances need verification, but because the material is sensitive to many influences, whereby its last state is apt to be much worse than its first. Mr. William Allyn Richards and Mr. Henry Briggs North have produced in collaboration a manual that, while it deals mainly with American practice, is not the less useful upon that account, the Americans having devoted an enormous amount of skill and patience to the study of a material which is perhaps even more extensively used on their continent than it is in Europe. Plainly worded and copiously illustrated, the manual treats no less clearly than exhaustively of the qualities of cement and the most approved methods of testing for them, and it should be alike useful in initiating the beginner and in providing the expert with a means of checking his own methods. An appendix contains specifications in accordance with American standards.

"A Manual of Cement Testing, for the Use of Engineers and Chemists in Colleges and in the Field." By William Allyn Richards, B.S. in M E., Instructor in the University of Chicago, and Henry Briggs North, D.Sc., Associate Professor of Chemistry in Rutgers College. Illustrated. Pages x. + 138, 9 ins. by 5¾ ins., price 6s. net. London: Constable and Company, Ltd.

Builders' Quantities.

Although quantity surveying is becoming more and more regarded as a matter for the specialist, it is nevertheless necessary for many who do not aspire to that title to have a sound knowledge of the principles and methods involved. Mr. W. E. Ballard has produced an excellent little manual which will serve either as good groundwork for those who intend to pursue the subject into its higher reaches, or as a treatise that in itself is comprehensive enough to meet subsidiary requirements. In every instance the plain and concise instructions are illustrated by actual examples, and the book forms a capital introduction to larger treatises such as "Leaning."

"Builders' Quantities." By Wm. Edgar Ballard, A M.Inst.C.E., P.A.S.I., etc. With diagrams. Pages vi. + 124, 7½ ins. by 5 ins., price 2s. 6d. net. London: Longmans, Green & Co., 39, Paternoster Row, E.C.

Structural Engineering.

In a new and enlarged edition of Mr. A. W. Brightmore's "Structural Engineering," a chapter is added on reinforced-concrete design, of which the theory is thus succinctly stated: "It is assumed (1) that the adhesion between the concrete and steel is such as to cause them to act together; consequently, the *strains*, whether in the concrete or steel, are proportional to the distance from the neutral axis; (2) that the steel takes up all the tension." A brief explanation of the system is followed by worked examples showing how to find the ratio of the tension in the steel to the maximum compression in the concrete, moments of resistance, bending moments, and so forth. Bending moments and shearing forces are dealt with very clearly in the first chapter in the book, in which successive chapters deal respectively with the equilibrium polygon (a subject that the author believes not to have received hitherto the attention to which its utility entitles it), braced girders of the several types, cross-sectional area of the members of a structure, stresses on planes through a point in a member, beams and girders with solid webs, continuous girders and cantilever bridges, deflection of girders, arches, suspension bridges, earth pressures and retaining walls, foundations and footings, straight and curved masonry dams, and concrete structures reinforced with steel rods where in tension. As an intermediate text-book—for it is neither tediously elementary nor abstrusely advanced—the book is a safe and an altogether excellent guide to the principles of statics, and hence to the practice of structural engineering, and thoroughly deserves the success that is evident from its appearance in a second edition.

"Structural Engineering." By A. W. Brightmore, D.Sc., M.Inst.C.E. With numerous diagrams. New and enlarged edition. Pages xiv. + 296, 8¾ ins. by 5¾ ins., price 10s. 6d. net. Cassell and Company, Ltd., London, New York, Toronto, and Melbourne.

SOCIETIES AND INSTITUTIONS.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.

The Construction of Modern Hospitals.

"Modern Hospitals" formed the subject of an interesting address delivered at a meeting of the Birmingham Architectural Association by Mr. William Milburn, jun., B.Sc., A.R.I.B.A., on the evening of January 9th. The president (Mr. G. Salway Nicol) was in the chair.

Mr. Milburn described and compared the characteristic features of the modern hospital of our own country, of the Continent, and of America. He remarked that when one came to study the principles upon which hospital construction was based one found considerable difficulty in laying down any hard and fast rules largely owing to the fact that the sciences upon which hospital construction depended, namely, medicine and hygiene, were, speaking generally, continually progressing by the aid of new discoveries and research, and it was impossible to say at any time that finality had been reached. This became at once apparent if they considered for a moment the influence which the discoveries in the field of bacteriology had
had during the last thirty or forty year
The medical requirements and the pr
blems involved in the treatment of the di
ferent diseases must, of course, be la
down by the medical profession, but it w
the province of the hospital architect so
design the buildings as to facilitate t
treatment and assist in the restoration
the patient to health. The general impre
sion which one received from an inspe
tion of many of the American hospita
erected during the last ten to fifteen yea
was that whilst, as buildings, the majori
were excellent, a very large number we
considerably lacking in many of the esse
tial requirements and details necessary
a hospital from medical and hygienic poin
of view. However, at the present tim
the youth and wealth of the country, t
immense population, the rapidly growi
cities, and the demands of medical educ
tion were necessitating the erection of ne
hospitals, and as the greatest attention w
being devoted by the authorities to t
subject of hospital design and constru
tion, there were a number of hospitals r
cently erected and others in course of co
struction which represented a great a
vance on the majority of the existing inst
tutions, and in all respects were well
to, and in some points excelled, the lea
ing hospitals of Europe. The Joh
Hopkins Hospital, Baltimore, opened
1889, was still one of the best hospitals
the United States and one of the most cel
brated pavilion hospitals in the worl
The design and planning of the Englis
General Hospital had at the present tim
arrived at a definite type which in its ma
outlines was rarely departed from exce
in matters of detail, the system adopte
being the pavilion principle of detache
blocks connected together by corridor
This type might be said to have originat
with the construction of the Herbert Mi
tary Hospital, Woolwich, 1860-64, and t
Blackburn and East Lancashire Infirmar
1858-65, and also further developed duri
the last century by such well-known e
amples as St. Thomas's, London, Norfol
and Norwich, Bedford County, Der
County, Birmingham General, and ma
others. When one compared the gre
pavilion hospitals of Germany and oth
countries with the majority of our own i
stitutions, one was at once struck by t
much greater size of the institutions of t
former countries, by the entire disassoci
tion of the kitchen and of service bloc
for the administrative and patients' buil
ings, by the grouping of the patient
buildings into definite departments in a
cordance with the diseases, the reduction
the accommodation of the large ward, t
number of special rooms in the ward un
and the non-disconnection of the sanita
annexes the much greater provision f
special treatment in hydro-electro an
mechano-therapeutics, the greater prov
sion for scientific work, research investig
tion and pathology, and the provision
balconies and roof wards for outdoor trea
ment.

He suggested we might emulate the Ge
mans in the provision of grounds an
gardens. The value of environment as a
important factor in the treatment
disease was, he believed, well recognise
and when one had seen the lay-out of th
grounds and gardens of such hospitals
those at Berlin and Cologne, one could n
help but contrast them favourably with th
majority of our own institutions. He w
well aware, however, that the out-patie
departments attached to our general ho
pitals necessitated the sites being in th
centre rather than in the suburbs of ou
cities. He had, however, always bee
struck by the fact that, as a rule, our poo

w infirmaries obtained excellent sites in ie suburbs, and they might hope that in ie future our general hospitals might be ble also to obtain such.

LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.

The Future of Art.

A meeting of the above society was held a Thursday evening, January 8th, at the eeds Institute, Mr. A. E. Kirk, .R.I.B.A. (the president), in the chair.

Mr. Frank Rutter, B.A. (curator of the eeds City Art Gallery), in the course of a cture entitled "The Future of Art," advocated a closer relationship between the chitect and the artist (both with regard painting and sculpture), as this would able good work to be placed in more iitable settings than the present overowded state of art exhibition peritted. He pointed out the large numer of successful artists who were amateurs the sense that they depended upon her work for a livelihood in the early ages of their career. Such men were not likely to turn out indifferent work as ose dependent entirely upon their art; id the future of art developed on such ies was more likely to produce work of higher standard considering the small emand compared with the large supply.

The following members took part in the scussion whch followed: Messrs. A. illets, Frank Foster, D. Bowman, and E. Braithwaite. A vote of thanks to e lecturer was proposed by Mr. S. D. itson, M.A., seconded by Mr. W. H. horpe, F.R.I.B.A., and carried. Mr. itter briefly replied.

SHEFFIELD SOCIETY OF ARCHITECTS.

Furniture and Decoration.

On Thursday, January 8th, Mr. C. E. iend delivered a lecture before the ove society on "Furnishing and Decoting from a Practical Standpoint." Mr. F. Watson (president) occupied the air.

The lecturer emphasised the value of a ose alliance between architecture and rnishing and decoration. It would be ll, he said, for clients to appreciate that e interior furnishing of a house bore me relation to the exterior.

Concerning upholstery, he said that, ing to much of the work being hidden, me shockingly slipshod work was often ne, and instead of horse-hair stuffing, ch materials as straw, shop sweepings, d even seaweed were sometimes utilised. ie lecturer went on to deal with the olesale manufacture of furniture, exiined the upholstery of an easy chair, d showed a fine selection of modern pestries, reproducing designs from the eenth to eighteenth centuries.

The President raised the question as to y high prices were paid for old Persian rpets that were considerably worn. Was because they carried some virtue that it s impossible to get in a new carpet?

Mr. Friend said why carpets obtained surd prices at sales was more than he ild tell. The more "holey" and more egular the Persian carpets the more luable they were supposed to be.

Mr. W. S. Purchon said that while he mired the work of other periods, he ought it was a much healthier state of ngs to develop furniture on modern es rather than resort to mere copying.

TOWN-PLANNING INSTITUTE.

Inaugural Dinner.

The Right Hon. John Burns, M.P., will be the guest at the inaugural dinner of the Town-Planning Institute, to be held on January 30th. It is now four years since the passing of the town-planning part of the Act of 1909. About three years represent the period of actual working, and the Institute will be able to congratulate the President of the Local Government Board on the success of a movement which, from a legislative point of view, owes everything to him. About 175 local authorities are at work, notwithstanding the necessary difficulties of the regulations, and considerably increased activity is anticipated. The dinner is also opportune in view of the action of the Local Government Board in calling local conferences to deal with the town-planning problems of Greater London.

The Town-Planning Institute has made a satisfactory beginning. The new Council is engaged in laying the foundations of a collection of town-planning material and literature which will be of great value to students and to all interested in the question. Professor Geddes has accepted nomination as the first librarian, and the valuable collection which he exhibited at Ghent has been offered to the Institute as a nucleus of its library and collection. The Council is also engaged in preparing the constitution of the Institute and a syllabus of meetings for the coming year. The next general meeting of members will be held in February. A large number of applications for membership have been received, but the consideration of these is being postponed till the constitution is settled. Those who are interested in town-planning will be welcomed to the inaugural dinner. Application should be made to the honorary secretary, Mr. George L. Pepler, Howard House, Arundel Street, Strand, London, W.C.

SOCIETY OF ARCHITECTS.

Annual Report.

The Council's report for the year ended October 31st, 1913, announces that ninety-four candidates have been elected to membership by ballot, and two graduates and twelve students have been admitted by the Council to the respective registers. The total membership on October 31st was 1,185. In the course of the report reference is made to the suggestion which the Society made to the Institute, that the two bodies should co-operate in the issue of joint standard documents. This proposal was declined by the Institute, who, however, sanctioned the inclusion in the Society's Year Book of the Institute's Schedule of Charges and Competition Regulations. Under "Architectural Education" an account is given of the genesis and establishment of the architectural atelier in Wells Street, Oxford Street, and of the work of the Beaux-Arts Committee in connection therewith. The Council is convinced that if the Society had done no other work during the past year than that of enabling the Beaux-Arts Committee to establish itself, it would have reason to be satisfied in having achieved something which is calculated to do the art of architecture in this country a lasting good. The Society's balance sheet shows a profit on the year's working of £216 14s. 8d., and a total surplus of assets over liabilities of £3,136 9s. 3d. Considerable space is devoted to the efforts made in connection with the statutory registration of architects. A feature of the report is "Some Notes on the Work of the Society of Architects, 1884-1914," by Mr. C. McArthur Butler, F.C.I.S., secretary to the Society.

SHROPSHIRE ARCHITECTURAL ASSOCIATION.

Registration.

On the proposition of Mr. Frank Shayler, F.R.I.B.A., seconded by Mr. V. G. Santo, A.R.I.B.A., the following resolution was passed unanimously at the annual general meeting of the Shropshire Architectural Association at Shrewsbury on January 10th: "That we, the members of the Shropshire Architectural Association, having considered the draft Bill for the Registration of Architects prepared by the Society of Architects, do give it our most cordial support and undertake to do our utmost to further its interest, and that a copy of this resolution be sent to the Press, the Secretaries of the R.I.B.A., and Society of Architects, and also to the five members of Parliament representing Shropshire requesting their support of the Bill when presented to Parliament."

SPECIAL LEGAL REPORTS.

Builders' Appeal in Claim under the Workmen's Compensation Act.

Barnes v. Evans and Co.

January 13. Court of Appeal. Before the Master of the Rolls, the President of the Probate, Divorce, and Admiralty Division, and Mr. Justice Eve.

This was an appeal by the respondents, the employers, from the award of the judge sitting at the Blackpool County Court as the arbitrator under the provisions of the Workmen's Compensation Acts, 1897 and 1906, in favour of the applicant, the dependent of a man named Barnes, who met with an accident in the course of his employment which resulted in his death.

Mr. Greaves Lord appeared in support of the appeal and Mr. Ernest Williams for the applicant.

Mr. Lord said the short point raised by the appeal was whether there was any evidence upon which the County Court judge could find that the deceased man was a workman within the meaning of the Act, and that point also involved the question whether the County Court judge had misdirected himself by casting the onus on the appellants of proving that the deceased was not a workman under the circumstances, but was an independent contractor. The appellants were a firm of builders, who, at the time of the accident, were engaged under a contract in building work for the Co-operative Wholesale Society at Blackpool, and in the course of that work it became necessary to have a slating sub-contract entered into. On February 20th, 1913, the appellants wrote to a Mr. Owen, a slater and plasterer carrying on business at Blackpool, asking him to quote for the slating work required to be done. Mr. Owen handed the appellants' letter to Mr. S. Barnes, the deceased, who described himself as a slater and tiler, and he wrote to the appellants offering to undertake to provide all labour for the work and to finish up to the satisfaction of the architect for the sum of £5 5s. Appellants accepted that estimate, and after certain correspondence had passed the appellants agreed to increase slightly the price at which Barnes agreed to do the work. Barnes started on the contract work on March 13th, but found some difficulty in getting a labourer to help him, labourers being scarce at that time, and he wrote to the appellants asking them to try to find him a labourer. Appellants sent him one, but Barnes discharged him and ultimately Barnes obtained a labourer himself. On March 17th the appellants, as the building owners were complaining of the delay in the completion of the contract work, sent a slater and a labourer to help Barnes on the job. At first Barnes objected to their working there, but ultimately he agreed to it. It then appeared that Barnes and his labourer continued to work independently of the slater and labourer whom the appellants had sent to assist on the job. Barnes provided his own tackle for the job. In the course of his employment Barnes on February 20th was killed. After his death, the appellants paid his widow in two separate payments. They first paid her the sum due to the deceased for extra jobs which he had done upon the works, and then they added to the account the £5 5s. and £1 3s., the extra amount they had agreed to give him. In the £6 8s. they deducted the money due to Barnes's labourer, who had not been paid at the time of Barnes's death, and the money due to the men they had sent to help Barnes, and they paid to Barnes's widow the balance. The County Court judge had decided that, owing to the appellants having sent a slater and labourer to help on the work, he was entitled to come to the conclusion that Barnes was no longer a sub-contractor, but was a workman at the time of the accident. He (counsel) contended that in so holding the learned County Court judge had misdirected himself.

Mr. Ernest Williams, on behalf of Mrs. Barnes, the widow, supported the award of the County Court judge. He admitted that originally the deceased man had entered into an independent contract with the appellants, but he submitted that that contract was put an end to when the appellants sent the men to work with Barnes on the job.

At the conclusion of the arguments, their lordships held that there was no evidence upon which the County Court judge could find that the admittedly independent contract which was entered into between Messrs. Evans and Co. and the deceased was changed into another contract whereby Messrs. Evans and Co. were the masters and the deceased was the servant, and that nothing was done by Messrs. Evans and Co. after the accident which would go to show that the contract was put an end to.

The appeal was accordingly allowed, Messrs. Evans and Co. not asking for costs.

Certificates Under a Building Agreement.

Ewens v. Cecil and Co.

January 14. King's Bench Division. Before Justices Ridley and Bankes.

This was an appeal by Messrs. Cecil and Co., architects and surveyors, of Station Road, Sunbury, against a judgment of Judge Harington, of the Chertsey County Court, awarding £100 to Mrs. C. Ewens, of Funtington, near Chichester, Sussex. In the alternative they asked for a new trial.

Mr. J. B. Eames appeared for the appellants and Mr. Le Queux for the respondent.

Mr. Eames stated that the action in the County Court was against his clients for alleged negligence as architects and surveyors in giving certificates under a building agreement. Consequent upon the report of the Referee, the County Court judge gave Mrs. Ewens judgment for £100. The case was of very great importance to architects, because counsel's main contention was that no action lay in the present case. This was, he contended, because the appellant gave certificates in a capacity of a quasi-arbitrator, and if this was so they were not liable to any action except on the ground of fraud or collusion. As regards the new trial, he asked for that on two grounds—namely, rejection of evidence which ought to have been admitted, and misdirection as to the measure of damages. Detailing the facts, counsel said that Mrs. Ewens in 1910 was called upon by the local authority to execute a number of repairs to fourteen cottages at Sunbury-on-Thames, and she appointed the appellants to superintend the work, which was carried out by a local builder. An essential clause of the agreement appointing the appellants was to the effect that their reasonable judgment as to whether the work was carried out properly and according to estimate was to be final and binding upon all parties. The appellants gave certificates from time to time, and two years afterwards Mrs. Ewens brought an action claiming damages for alleged negligence, because, during the carrying out of the work, the appellants had given certificates in respect of some of the work which it was alleged had now been found to have been badly executed.

Mr. Le Queux said his submission was that the work was supervised without any skill at all.

Long legal arguments followed, Mr. Le Queux contending that under the agreement in this case the appellants were not quasi-arbitrators, but liable to the respondent for negligence of which the Referee had decided against them.

Mr. Justice Ridley, in giving judgment, said that the point had been urged that the appellants were not liable because they acted in the capacity of a quasi-arbitrator under their agreement with the respondent. On the other hand, it was said that the appellants were simply agents of the building owner, and responsible to Mrs. Ewens for having failed to certify properly. It seemed to him that the decision depended upon a full consideration of the clauses of the agreement between the parties. Having thus considered the agreement, he had come to the conclusion that the appellants were in such a relationship to the respondent as not to make them liable for mere negligence. The duty put upon them by the agreement called for the exercise of their skill and discretion and put them into the position of a quasi-arbitrator. He believed that it was perfectly sound to say that a man might act in such a case as this in two capacities—one merely as agent and the other as an arbitrator between the building owner and the contractor. That followed from various decisions, but in this case he thought that the appellants acted in the latter capacity. It seemed necessary to conclude that in deciding whether the work was defective or not whether it was according to estimate or not, the appellants' own reasonable satisfaction was to govern these decisions, and according to the agreement that was to be final and binding. His lordship added that he could not come to any other decision but that the appellants were acting here in the capacity of a quasi-arbitrator, and were not liable for negligence except in the event of fraud or collusion, of which there was no evidence in the present case. Therefore, the judgment of the County Court judge was wrong.

Mr. Justice Bankes concurred, and said there were three clauses in the agreement which went, in his opinion, to show that the appellants were in the position of quasi-arbitrators and not agents of the building owner. Their position in each case depended upon the construction of the agreement as a whole.

The Court accordingly reversed the judgment of the County Court judge, finding in favour of the appellants, with costs.

Builders' Claim for Balance for Work Done

Bovis, Ltd., v. Galina.

January 14. High Court of Justice. Before Mr. Mui Mackenzie, Official Referee.

This was a claim by Bovis, Ltd., builders and contractors, of Upper Berkeley Street, Portman Square, against Peter Galina, in respect of decorative and building work carried out at the defendant's premises 44, Dean Street, Soho.

The scheme involved an expenditure of some £5,000 odd, and the claim was for the balance, a sum of about £2,100.

The defendant raised various defences including a plea of a tender for £1,500 before action brought, and the defendant also alleged that there had been certain mistakes on the part of the quantity surveyor—an allegation which was denied by the plaintiffs.

Mr. O. Wertheimer appeared for the plaintiffs and Mr. S. Bevan for the defendant.

Evidence was given on behalf of the plaintiffs' case by Mr. H. B. Saunders, of Messrs. Selby and Saunders, quantity surveyors, of Caxton House, Westminster and Mr. S. Joseph, the managing director of Bovis, Ltd.

During the progress of the case a consultation took place between counsel and their clients, and in the end Mr. Wertheimer announced that the action had been settled on terms endorsed upon counsels' briefs. It was agreed that there should be judgment for the plaintiffs for the amount of their claim, less a sum of £27. Counsel added that any imputations that might reflect on Mr. Saunders were unreservedly withdrawn, and it was admitted that he had carried out his work in a proper and professional manner.

Mr. Bevan said he made no charges whatever against Mr. Saunders. He was a gentleman who had acted quite properly and professionally in the interest of his clients. His position was beyond attack and beyond criticism.

The Official Referee said he had not heard the slightest reflection in that court against Mr. Saunders or any other professional gentleman engaged in the case. He believed he had had the pleasure of seeing Mr. Saunders before, and nothing he had heard in this case had occurred to alter his high opinion of Mr. Saunders.

The case was settled on terms agreed between the parties and endorsed upon the briefs of counsel.

Waterproofing Church Walls.

Repairs are now being carried out at St Margaret's Church, Folkestone, under the direction of Messrs. Bromley and Dahl who, in order to ensure damp-proof walls have specified "Pudlo" for inclusion in the cement used for rough-casting.

COMPETITIONS.

Band Pavilion, Folkestone.

The premiums in the above competition ıve been awarded by the assessor, Mr. dwin T. Hall, F.R.I.B.A., as follows: t, Messrs. Palmer, Jones, and Grant, ondon, W.C.; 2nd Mr. L. R. Guthrie, ondon, W.; 3rd, Messrs. Schooling and endy, London, W.C.

hurch of St. Germain, Birmingham.

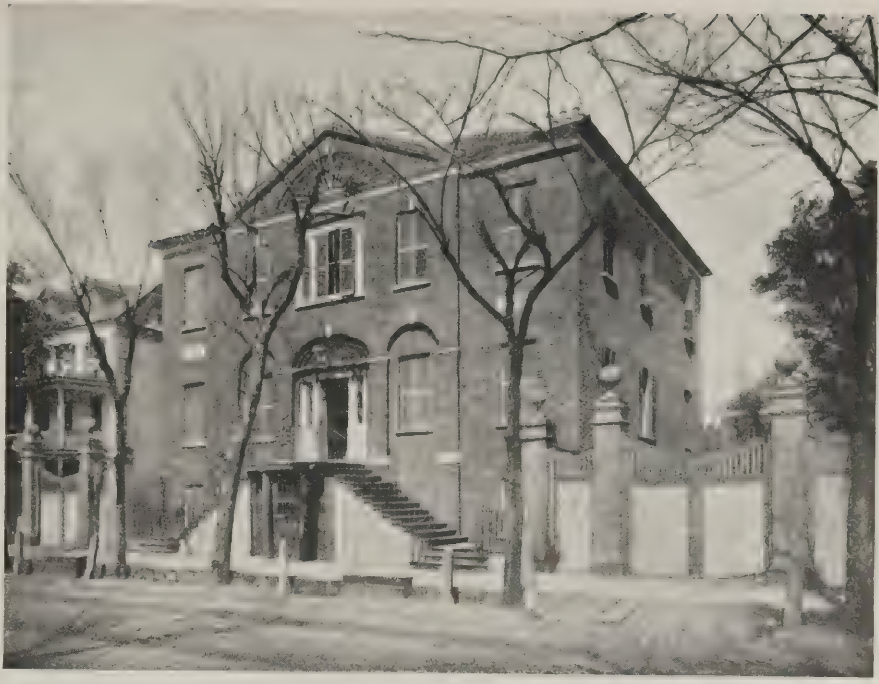
In the above competition (Mr. Charles . Bateman, F.R.I.B.A., assessor) the sign by Mr. Edwin F. Reynolds has en selected for execution. Premiums ten guineas each have been awarded to r. W. H. Bidlake, Messrs. Harvey and icks, Mr. H. Hobbiss, Mr. A. S. Dixon, ıd Mr. J. L. Ball.

Municipal Offices, Shipley.

Mr. F. E. P. Edwards, F.R.I.B.A., ıeffield City Architect, has been ap- inted assessor in the above competition, ıich is limited to architects practising in orkshire. Applications for particulars d plan of site should be addressed to e Clerk to the Council.

etropolitan Water Board New Offices.

We are asked to state that the invita- n to take part in the above competition, dressed to Mr. Burnett Brown, was ac- pted by the firm of Brown and Barrow, R.I.B.A., and not by Mr. Brown alone, stated in our last issue.



COLONIAL ARCHITECTURE: BULL HOUSE, CHARLESTON, SOUTH CAROLINA.

(This illustration should be studied in conjunction with Mr. Richardson's lecture on "The Classic Tradition in America," beginning on page 46.)

Concert Hall, Hythe.

Hythe Corporation have decided to institute a competition among architects for designs for a new concert hall. The prizes to be offered are £50, £25, and £10.

Baths, Paddington.

At a recent meeting of Paddington Borough Council the Baths and Washhouses Committee reported that they had selected six architects to take part in the competition for proposed new baths, designs to be sent in by March 2nd. The names of the architects chosen were not mentioned.

Housing Scheme, Greenock.

Greenock Corporation have decided to invite designs for eighteen tenements to contain 162 two-roomed houses, to be rented at £8 5s. The total cost is estimated at between £30,000 and £40,000.

Town Hall, Middleton.

A new town-hall is to be erected at Middleton at a cost of £18,000. It is recommended that Mr. Hastwell Grayson, F.R.I.B.A., be appointed assessor, and that premiums of £100, £60, and £40 be offered in competition.

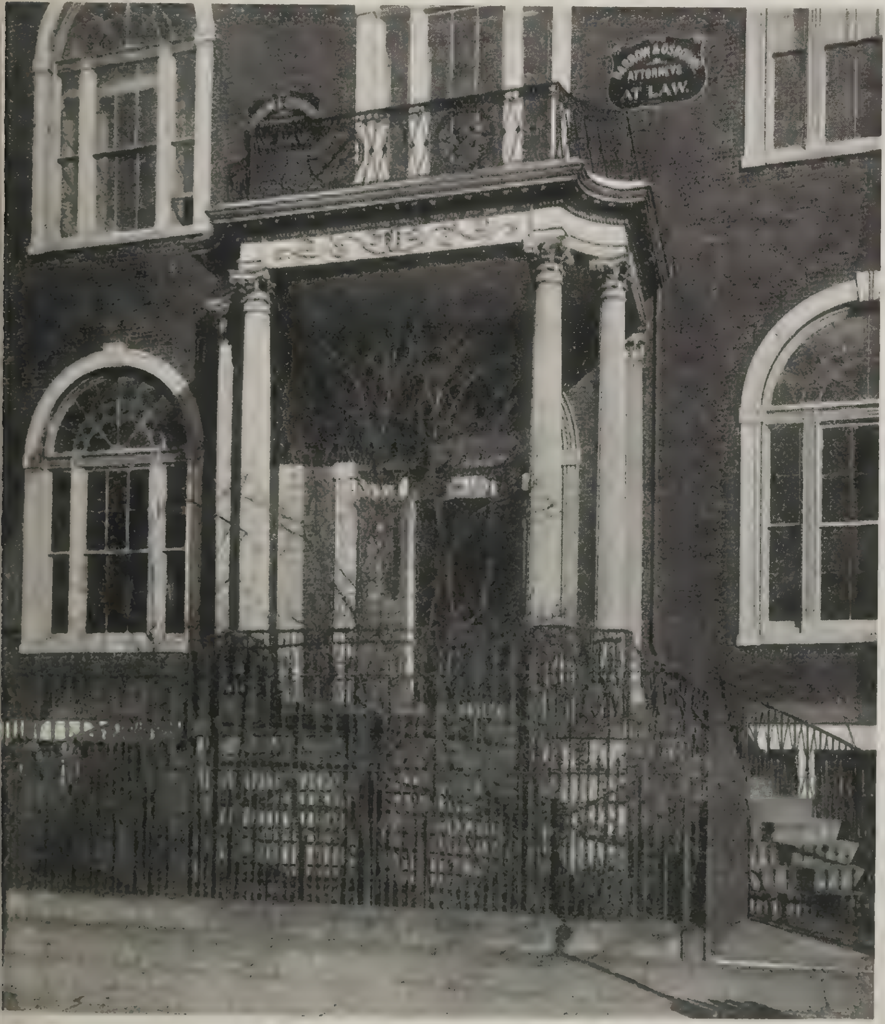
OBITUARY.

Mr. Richard John Leeson.

Mr. Leeson, whose death is announced as having taken place at Lacock, in Wiltshire, was a member of the firm of Oliver and Leeson, of Newcastle-on-Tyne. He was born at Norwich, where he executed some important architectural work. The greater part of his reputation was gained in Newcastle. About twenty years ago he repaired the mediæval tower that forms part of the cathedral of this city, a piece of work that called for great scholarship and architectural intuition, and he was prominently identified with many of the most striking buildings in the town. From time to time he exhibited architectural drawings at the Royal Academy. He lived for many years at Cullercoats, where he was an officer of the Volunteer Life Brigade. He was a member of the Northumberland County Council.

Mr. James Charles Tanner.

We regret to announce the death, in his forty-fourth year, of Mr. James Charles Tanner, chief clerk of the Royal Institute of British Architects. Mr. Tanner had



OLONIAL ARCHITECTURE: PORCH TO GORDON HOUSE, SAVANNAH, GEORGIA.

(This illustration should be studied in conjunction with Mr. Richardson's lecture on "The Classic Tradition in America," beginning on page 46.)

been in ill-health for some two years past suffering from pulmonary consumption, and he died in Brompton Hospital on Tuesday, January 13th, four days after admission. He had been in the service of the Institute for over twenty-eight years.

PROJECTED NEW WORKS.

County Offices, Chelmsford.

New county offices for Essex are to be erected at Chelmsford at a cost of £46,000.

Slaughterhouse Additions, Glasgow.

A new set of chill-rooms are to be erected by the Glasgow Corporation at the Hill Street Slaughterhouses.

Sanatorium, Forfar.

Messrs. Maclaren, Sons, and Soutar, architects, Dundee, are preparing plans for a new sanatorium to be erected at Normanside, Tannadice, Forfar.

Hospital, Irvine.

Plans have been approved by Irvine Town Council for the erection of a new hospital for infectious diseases.

Union Offices, Lichfield.

Lichfield Board of Guardians have recommended the erection of a new board room and offices at an estimated cost of £2,000.

Royal Exchange Extension, Manchester.

The board of directors of Manchester Royal Exchange have approved plans for the extension of their building at a cost of £600,000.

Pier Improvement, Rhyl.

Rhyl Council have approved plans of a scheme for the improvement of the pier and its buildings at an estimated cost of £14,920.

Richmond Bridge Widening.

Surrey C.C. have approved a scheme for the widening of the road and footways and for the improvement of the gradient of Richmond Bridge.

Buildings, Mold.

Mold U.D.C. have passed plans of alterations at 26, High Street, Mold, a new house in Grosvenor Street, and a cinema theatre in Chester Street.

Working-class Dwellings, Chard.

Sanction has been given by the L.G.B. to the borrowing of £1,200 for the purchase of land in Old Town, Chard, as a site for working-class dwellings.

Laundry, Harwich.

Harwich Town Council have approved plans for the erection of a steam laundry for the Harwich, Dovercourt, and District Sanitary Laundry Company, Ltd.

Lodging-house, Dykehead.

A model lodging-house, with accommodation for sixty persons, is to be erected for the Shotts Model Lodging House Co., Ltd., in King Street, Dykehead, Shotts.

Works, Swindon.

Among the plans approved by the town council are the following: Six houses, the Mall, for Mr. E. H. Bradley; tobacco factory for the Imperial Tobacco Company.

Bridges and Houses, Cannock.

Plans have been passed by the U.D.C. for proposed new bridges under Green Lane and over Rumer Hill Road for the Mid-Cannock Colliery: seventy-two houses in Hednesford Road, Rawnsley, and twenty-four houses in the Rawnsley Road, Rawnsley, for the Cannock and Rugeley Colliery Company.

Library and Baths, Bradford.

Plans have been approved for the erection, at an estimated cost of £6,350, of a branch library and cottage baths on land belonging to the corporation at Tennyson Place and Undercliffe Street.

Working-class Dwellings, Bridlington.

An enquiry by the L.G.B. has been held at Bridlington into the application of the Town Council for sanction to a loan of £3,150, to be applied to the erection of working-class dwellings.

Conversion Work at Inns of Court Hotel.

Extensive alterations by the Post Office authorities are about to be carried out at the Inns of Court Hotel, which is to be converted into a telephone exchange for the Holborn district.

Bathing Pavilion, Clacton.

Clacton U.D.C. have decided to build a new bathing pavilion in the east cliff. The estimated cost of the work, which includes the removal of a length of sea-wall coping, etc., is £850. Accommodation will be provided for eighty bathers.

Labour Hall for London.

As briefly noted in last week's issue of the journal, an association of about fifty trade unions proposes to erect a large labour hall in London at a cost of £55,000. The building is to be erected at the corner of High Holborn and Drury Lane, or on an alternative site in the neighbourhood.

Works, West Hartlepool.

The following plans have been approved: Alterations and additions to offices, Mainsforth Terrace (South Durham Steel and Iron Co.); workshop and store, Middleton Road (Central Marine Engine Works); altering Zetland Hotel, Church Street (J. W. Cameron and Co., Ltd.); laying out Tunstall Court Estate, off Grange Road (Lord Furness); new school off Church Street, Seaton Carew (Rev. C. F. Bickmore).

Buildings, Lincoln.

Among the plans passed by the City Council are the following:—Six houses, Severn Street, W. and H. Hopes; four houses, West Parade, R. L. Holland; fifteen houses, West Side Whitehall Grove, R. L. Holland; addition to the New Bridge Inn, Waterside South, J. Hole and Co.; cycle works and show-room, St. Benedict's Square, W. I. Binks and Co.; open-air school, South Park, Education Committee.

Works, Hendon.

Hendon District Council have approved plans for twelve houses, West Avenue (Messrs. Edwin Evans and Sons); new road, Basing Hill (Ecclesiastical Commissioners); three pairs houses, Wessex Gardens, Golder's Green (Mr. Edmondson); enlargement and drainage of St. Mary's Church; six terrace houses, Dersingham Road, Cricklewood (Mr. S. A. Kendall); extension of garage at the Burroughs (London General Omnibus Co., Ltd.).

Buildings, Bedford.

The following plans have been recommended by the Town Council for approval: Twelve houses, Pearcey Road, for Mr. H. Burridge; alterations to 41, High Street, for Messrs. Rudge Whitworth, Ltd.; house, Park Road, for Mr. Edwards; seven houses, Hardwick Road, for Mr. E. Casbeard; additions to St. Mary's Street, fo Messrs. Nicholls and Son; alterations etc., 21, Lurke Street, for Messrs. Chillingworth and Phillips; six houses, Bridg Road, for Mr. F. Bushby; three houses Ivy Road, for Mr. J. Foster; and additions to factory, Miller Road, for Messrs Peek, Frean and Co., Ltd.

Buildings, Croydon.

Croydon Borough Council have consented to the erection of the following works: Additions to cinematograph theatre, Windmill Road (J. J. Taylor); fifteen houses, Melrose Avenue (W. Aston) six houses, Mersham Road and fifteen houses and motor shed, Hythe Road (H Harrison); cinematograph theatre, Lower Addiscombe Road (G. W. Booth); four houses, shops, and stables London Road (E. Bates); cinematograph theatre, Lower Addiscombe Road (Greenall and Cole).

Buildings, Blackburn.

The following plans have been approved: Bakehouse, Limefield, for Mr. T. Prest; saw mill, Oban Street, for Messrs. T. Dawson, Ltd.; motor garage, Higher Audley Street, for Messrs. John Baynes Ltd.; motor garage, Edgerton, East Park Road, for Mr. D. M. Hollins; garage alterations, and additions, Byrom Street for Messrs. T. Higson and Sons; six houses, Slater Street, for Mr. Lawrence Wild. Alterations and additions, 64, King William Street, for the executors of John Charnley; eight houses, Shorrock Lane, for Mr. Jesse Archer: fourteen houses, Cecilia Street, for Mr. H. Southworth; motor garage, Appleby Street, for Messrs. Joseph Appleby and Sons, Ltd.

Buildings, Aberdeen.

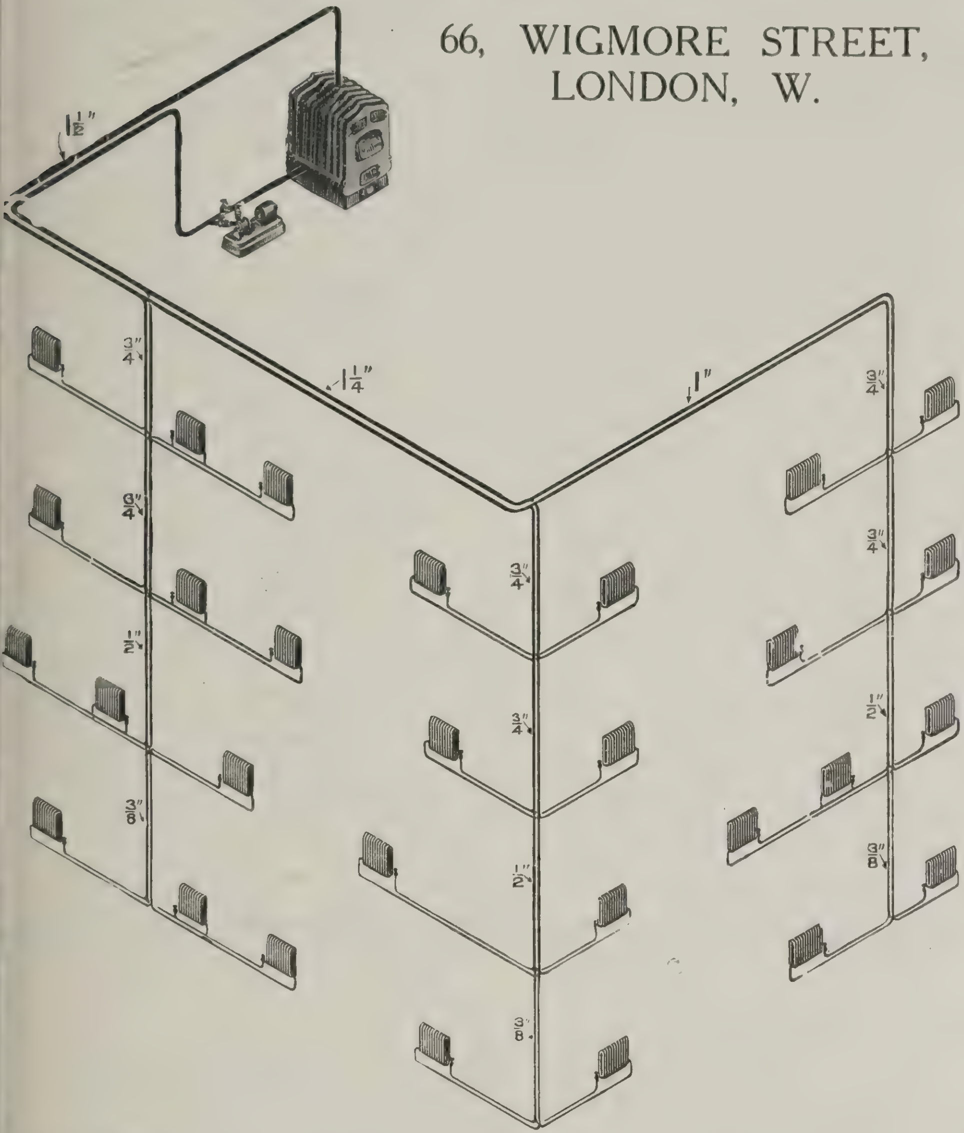
The plans have been approved of the following new buildings: Dwelling-house on the south side of Victoria Road, for Mr. Alexander Forbes and Mr. Alexander Forbes, jun., per Mr. J. A. O. Allan, architect. Store on the north side of Palmerston Road, for William Davidson and Co., Ltd. Alterations in connection with garage on the north side of Union Row, for Claud Hamilton (Aberdeen), Ltd., per Messrs. Jenkins and Marr, architects. Alterations on shop front at 94, Victoria Road, for Mr. George Buthlay, draper, per Mr. A. H. L. Mackinnon, architect. store and offices on the north side of Poynernook Road, at its junction with Raik Road, for Messrs. W. A. Hay and Co., iron merchants, per Mr. William F. M'Robb, carpenter. Alterations and additions in connection with premises. Nos. 24-26, King Street, for Mr. Alexander Clark, draper, per Mr. John Milne, architect. Garage at the rear of the dwelling-house No. 251, Holburn Street, for Dr. William Sheriffs, per Mr. John Milne, architect. Warehouse on the south side of Catherine Street, for the North of Scotland Equitable Loan Co., Ltd., per Mr. George Watt, architect. Alterations at Nos. 20-22, King Street, for Mr. John E. Esslemont, merchant, per Messrs. Wilsons and Walker, architects. Alterations and additions to fish-curing premises on the east side of Clyde Street, for Mr. R. W. Davidson, fish-curer, per Mr. George Cowie, carpenter.

New Architectural Society for Preston.

A new "Society of Architects, Surveyors, and Civil Engineers," has been formed in Preston, under the presidency of Mr. W. Rawcliffe. Mr. A. J. T. Ellison is the honorary secretary, to whom all applications for particulars should be addressed.

BENHAM & SONS, Ltd.,

66, WIGMORE STREET,
LONDON, W.



THE "PERFECT" SYSTEM OF HEATING BY ACCELERATED LOW PRESSURE HOT WATER—BY MEANS OF SMALL PIPES RUN IRRESPECTIVE OF LEVELS.

Recent Installations of Benham's "Perfect" System of Heating include:

GRAFTON HOTEL, Tottenham Court Road, W.
Architects, Messrs. Seth-Smith & Monro.

HYDRO HOTEL, Eastbourne.
Architect, J. W. Woolnough, Esq.

NELSON HOSPITAL, Wimbledon.
Architects, Messrs. Hatch & Hinds.

SEAMEN'S HOSPITAL and SCHOOL of TROPICAL MEDICINE, Albert Docks, E.
Architects, Messrs. A. Marshall Mackenzie & Son.

OFFICES of L.B. and S.C. Rly., London Bridge.
C. L. Morgan, Esq. (Engineer).

SHOWROOMS of MINERVA MOTOR CO., Tottenham Court Road, W.
Architect, G. Vernon, Esq.

ADDITIONAL PREMISES of PRUDENTIAL ASSURANCE CO., Holborn, E.C.

RECREATION HALL, Southall.
Architects, Messrs. A. Marshall Mackenzie & Son.

ST. NICHOLAS CHURCH, Charlwood.
Architect, Clyde Young, Esq.

ALL SAINTS' CHURCH, Goodmayes.
Architect, P. K. Allen, Esq

AVINGTON PARK, Alresford.
Architects, Messrs. Millar & Cox.

THE GATE OF ST. JOHN, Ryde.
Architects, Messrs. Albury, Rising & Morgan.

Etc., etc.

Messrs. BENHAM'S Cooking Apparatus is all manufactured in their works at Battersea, S.W.

They claim that each fitting is the best of its kind, and every effort has been made to secure Durability, Economy, and Efficiency.

The Kitchen of 46, Grosvenor Street, W., showing Coal Range (French pattern), with Charcoal Grill, Plate Rack and Tiled Hood; Gas Hot Plate with Ovens under, Gas Roasting Oven, Gas Pastry Oven, central Wood Table with Steam Hot Closet at one end; Glazed Hood over Gas Fittings.
Architects, Messrs. Detmar Blow and Fernand Billerey.

BENHAM & SONS, Ltd., 66, Wigmore Street, LONDON, W.

ELECTRICAL NOTES.

A Model Wiring Specification.

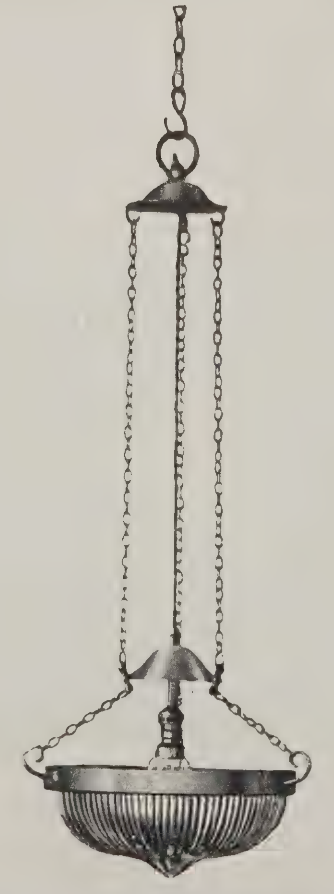
We have received from Mr. W. R. Rawlings, of Messrs. Rawlings Brothers, Ltd., 82, Gloucester Road, S.W., some "Notes and Suggestions for Drawing up a Model Specification for Electric Wiring." It is very encouraging in these days, when electrical contractors as a class come in for so much abuse for alleged want of initiative and commercial instinct, to see such an excellent little work emanating from this well-known firm of electrical contractors. The specification, for it is really one in spite of the modest title, is drawn up so as to be common to the following systems: The Kalkos System, the Steel Tube System, the Stannos System, the Wood Casing System (all with two wires from the supply mains), the Kalkos Earthing System, and the Stannos Earthing System (both with one wire from the supply mains, with a transformer, or from an independent supply). A special and separate clause is given for each of these systems, and, the type of system having been selected, the corresponding clause is inserted in the place left for the system in the specification. The latter is then complete.

We have described in these columns at various times the systems referred to, so there is no need to go over the ground again, particularly as they are now more or less well known. The author does well, however, to draw attention to the fact that steel tubes (according to the rules of the Institution of Electrical Engineers) must be screwed or connected by means of a grip joint. We wonder how many electrical contractors who do jerry-wiring observe these rules, or what steps are taken by those superintending the work to enforce them. As a matter of fact, there is any amount of small property being run up by small builders, who sub-let the wiring at such ridiculous figures that it is impossible to carry out good work at a profit. Wires are threaded into steel tubes with slip joints and without grips—sometimes no tubes are used in the walls at all, the insulation of the wires being exposed to the corrosive action of damp plaster. However, this is by the way. Of course there is also a vast amount of good wiring being done, but even now we think there are too few contractors who make full use of the fact that in the Stannos and Kalkos systems they have an excellent means for reducing the cost, under the conditions permissible, by wiring on the concentric principle. There are several little points in the "Notes" which might be picked out and criticised, but in view of the title this would hardly be fair, and it is for those, therefore, who propose to base their own specification on this groundwork to make what modifications and amendments they think fit.

Crystal Glass Fittings.

In certain circles and movements there is a tendency to revive some of the fashions and styles of the mid-Victorian era, at any rate those which are reasonable and sane, amongst which crinolines are not included, nor gilt-legged chairs nor wax fruit. Perhaps one of the most pleasing fashions of the time was the lustre form of chandelier, especially with candles, but this fell into desuetude owing to the fact that the lustres became so dirty when used with gas. We do not think that even now, with electric light, crystal glass fittings will ever become popular again in any but large living-rooms, partly because of the servant question and partly because of modern ideas in regard to efficient illumination of small rooms and to eye strain. However, in large halls, drawing-rooms, and such places, especially where the decorations are elaborate, there is a useful field for this revival, and its beautiful adaptability to the electric light. Hence, the General Electric Co., Ltd., have issued a 38-page catalogue devoted entirely to such fittings.

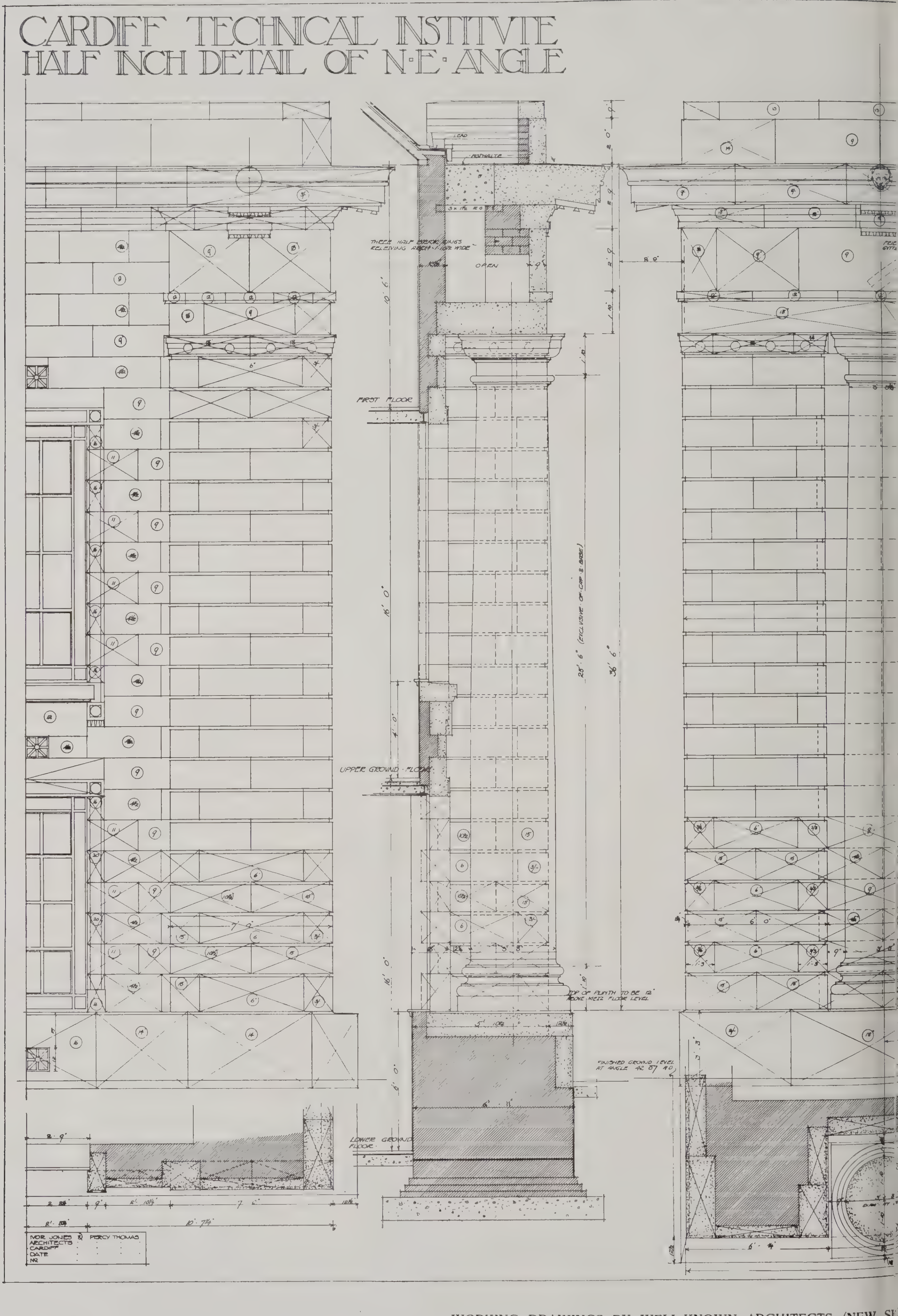
Naturally, the designs of most of the fittings are in the French style, to harmonise with the gorgeous decorations of the Bourbon period, which are somewhat fancied now in certain public interiors, and the effects are enormously enhanced by the better disposition of the electric lamps in comparison with gas and candles. It is not necessary to think that all such fittings are expensive. The price depends entirely on the size and elaboration of the glass work, and some quite small fittings, such as three-light ceiling fittings, table standards, and simple lustre shades are included. A useful and practical feature of these fittings is that spare crystal drops are supplied to replace broken ones. This is important with this class of fitting, because the loss of one or two drops or lustres would immediately detract from the pleasing effect. The designs in the catalogue are appropriately in white on a black background, and some of them should be seen to be appreciated. We understand that no general distribution of the catalogue will be made, but copies will be sent to those who are sufficiently interested in decorative lighting schemes to apply.



Fittings for Semi-Indirect Lighting.

Many of the leading authorities on artificial lighting, whose testimony is supported by medical officers, regard the semi-indirect lighting system as the best. With this method all disadvantages of the direct method, such as "glare," are eliminated, whilst that "flatness" so evident with the purely indirect system is also avoided. Our new catalogue of semi-indirect fittings is now ready.

Simplex Conduits, Ltd.,
Garrison Lane, Birmingham,
113-7, Charing Cross Road, London, W.C.


CARDIFF TECHNICAL INSTITVTE
HALF INCH DETAIL OF N·E·ANGLE
LEAD
ASPHALTE
3 x 1½ R.S.J.
THREE HALF BRICK RINGS RELIEVING ARCH · 1·10½ WIDE
OPEN
FIRST FLOOR
UPPER GROUND · FLOOR
LOWER GROUND FLOOR
TOP OF PLINTH TO BE 12" ABOVE MEZZ FLOOR LEVEL
FINISHED GROUND LEVEL AT ANGLE 42 87 9.0
25' 6" (EXCLUSIVE OF CAP & BASE)
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16' 0"
6' 0"
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6' 11"
8' 0"
6' 4"
IVOR JONES & PERCY THOMAS
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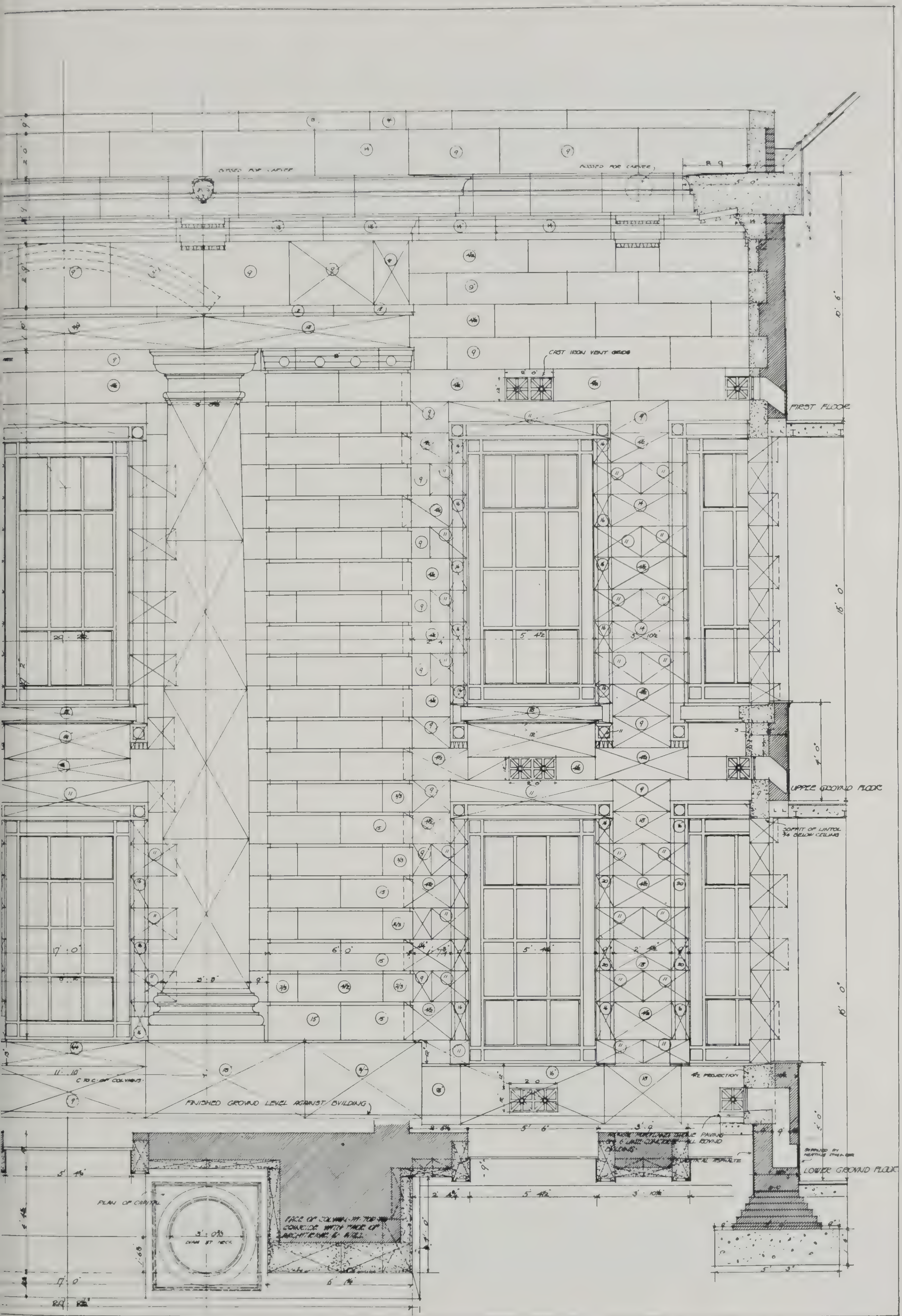
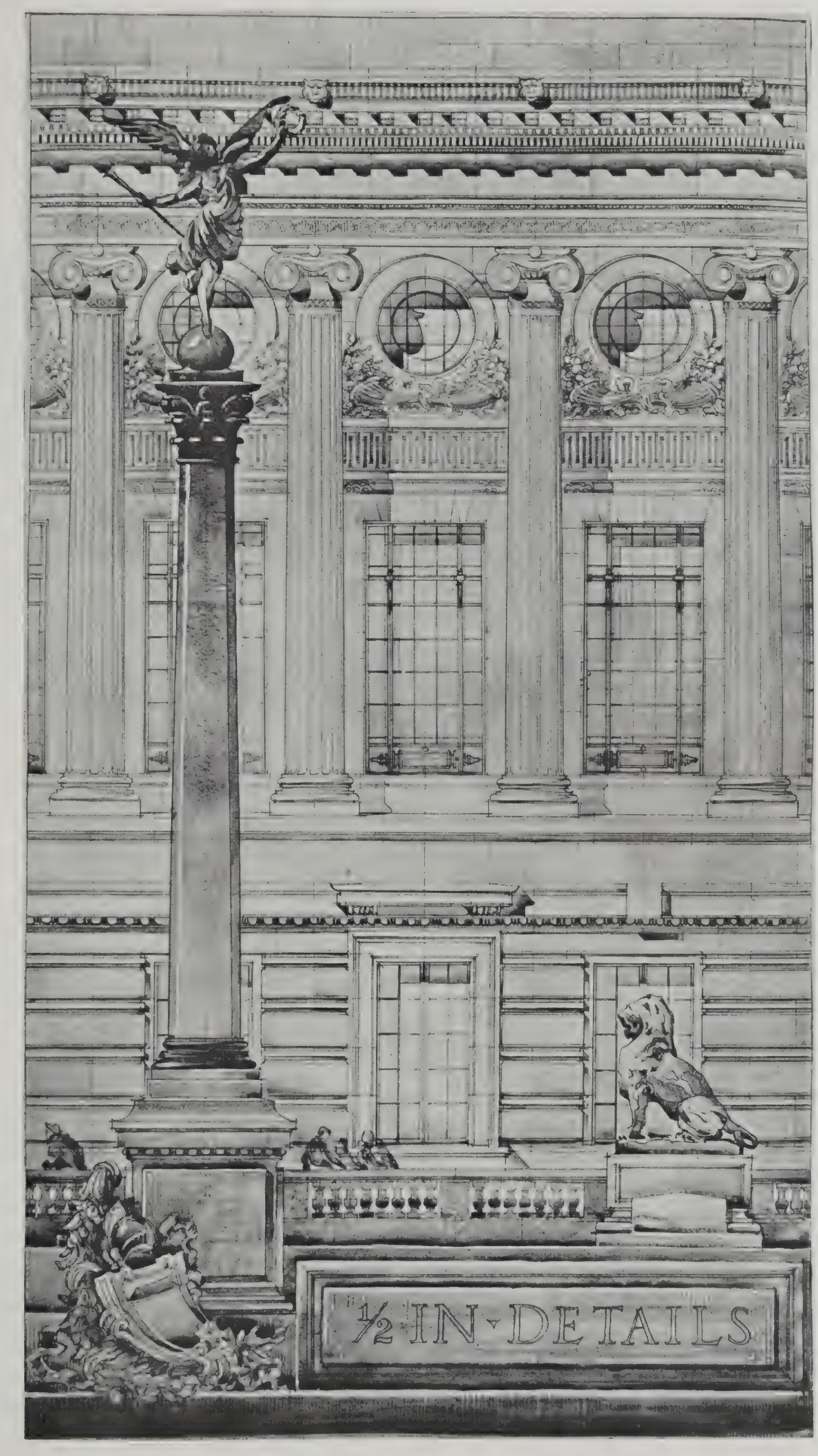
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW S

IVOR JONES AND PE



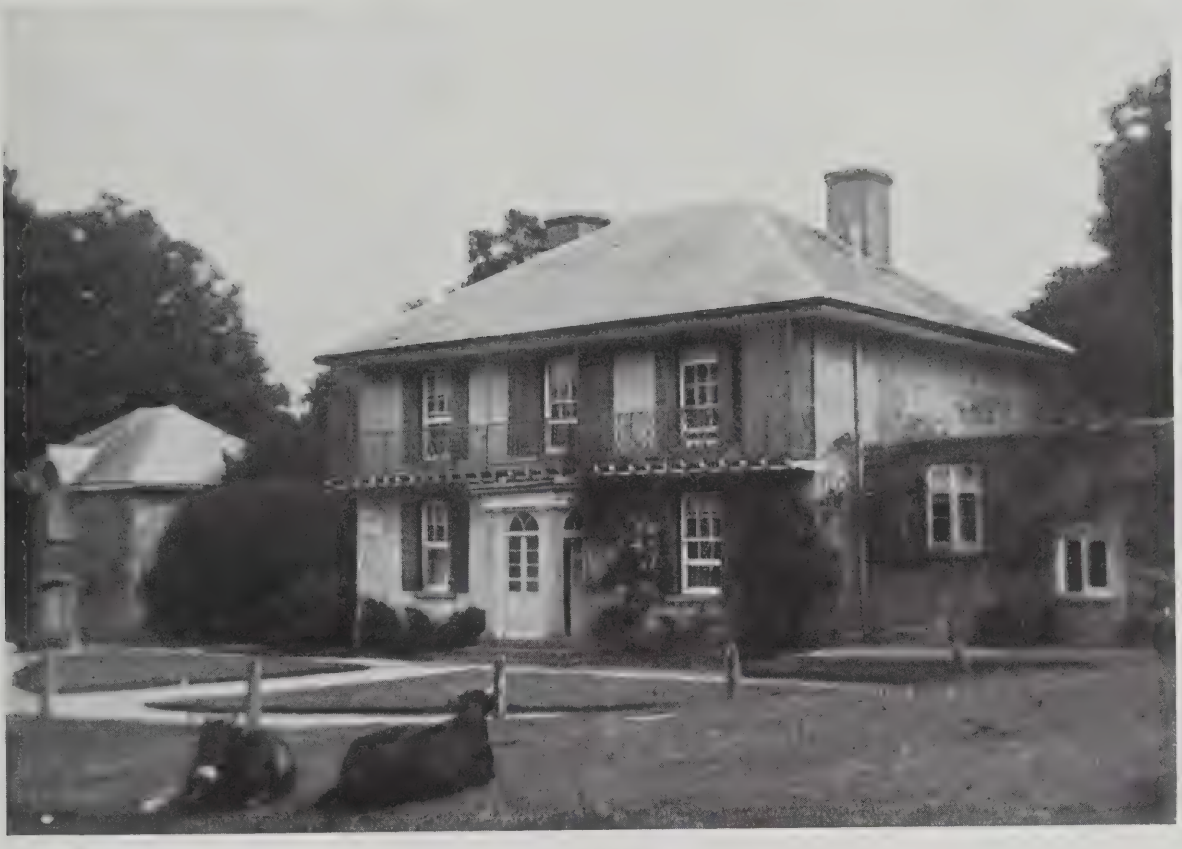
XIII.—CARDIFF TECHNICAL INSTITUTE: ANGLE OF FAÇADE.

OMAS, ARCHITECTS.

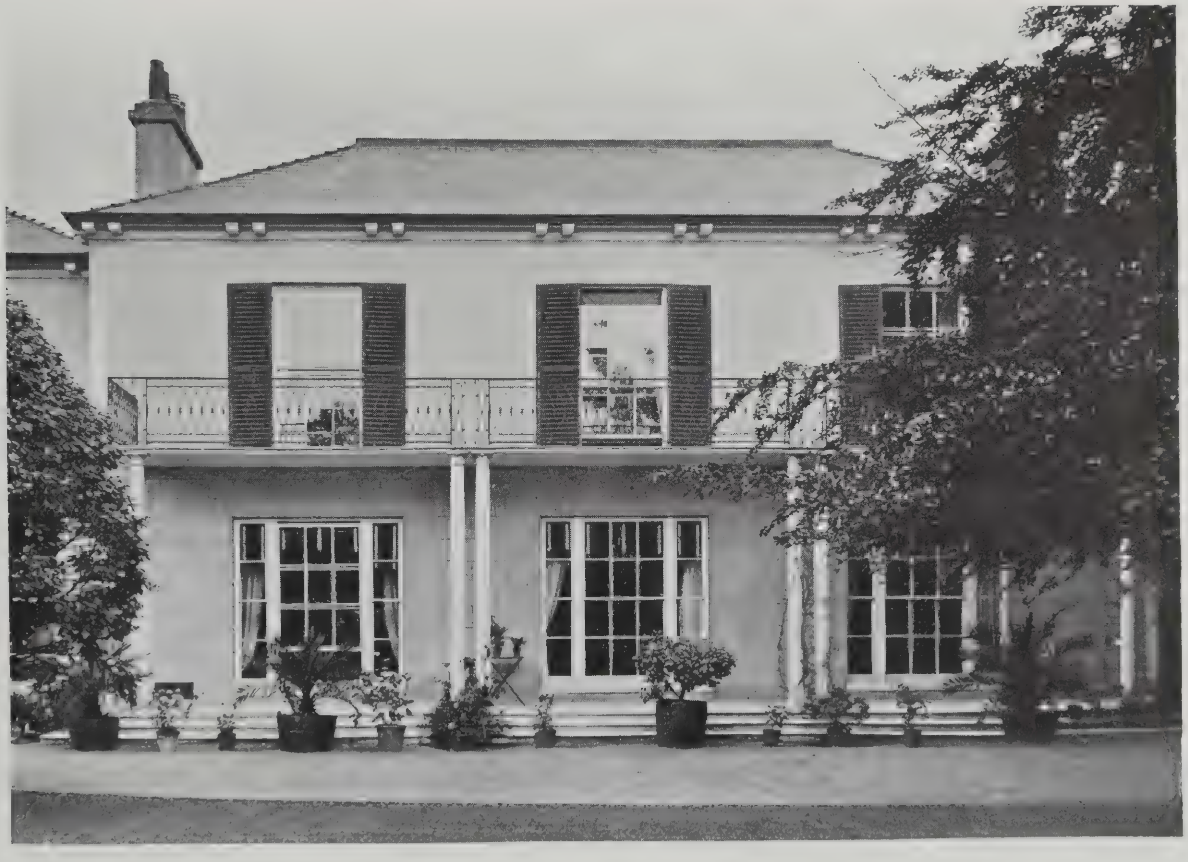


STUDENTS' DRAWINGS. IV.—ROME SCHOLARSHIP IN ARCHITECTURE: DETAIL OF FAÇADE TO A CIVIC CENTRE.

BY ERNEST CORMIER.

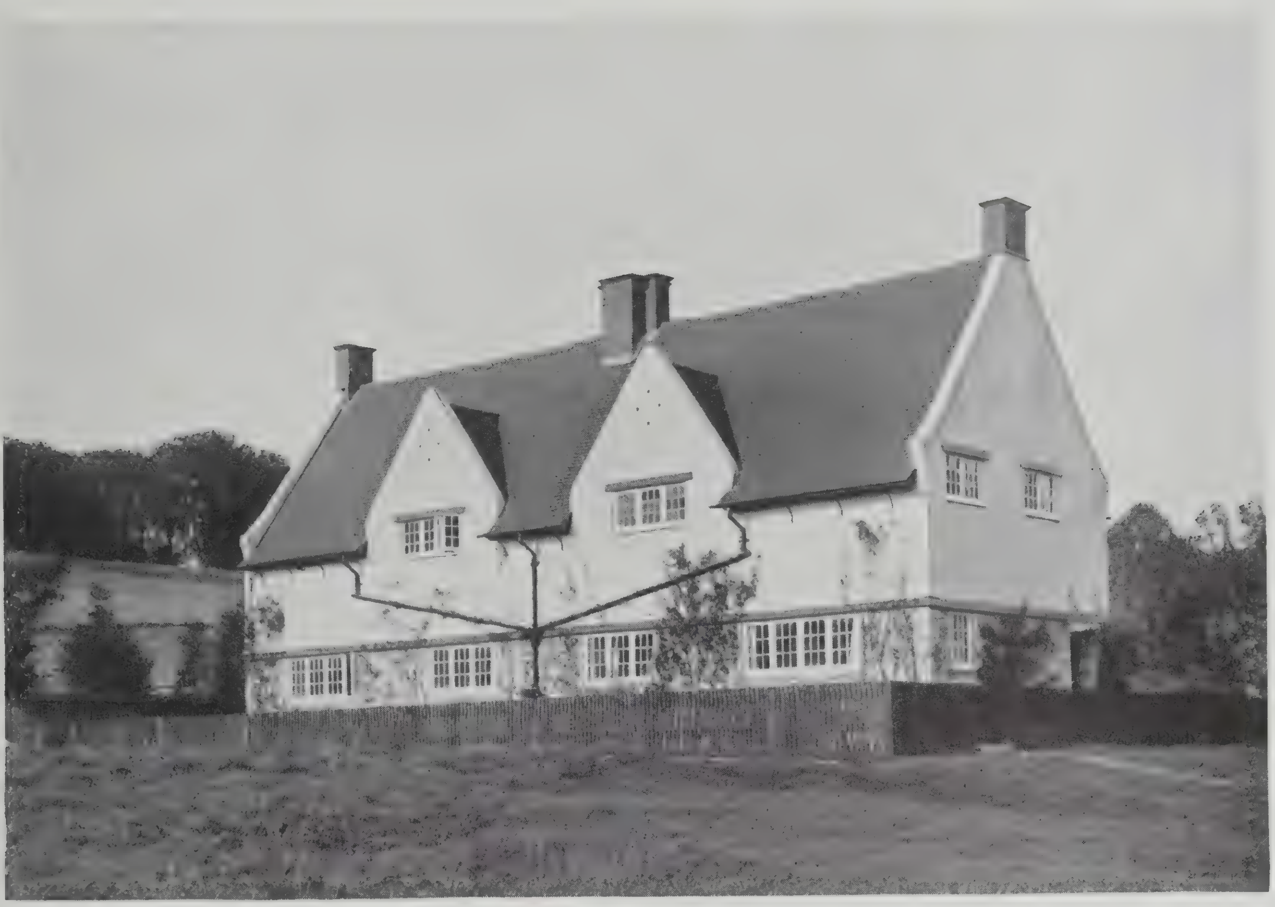


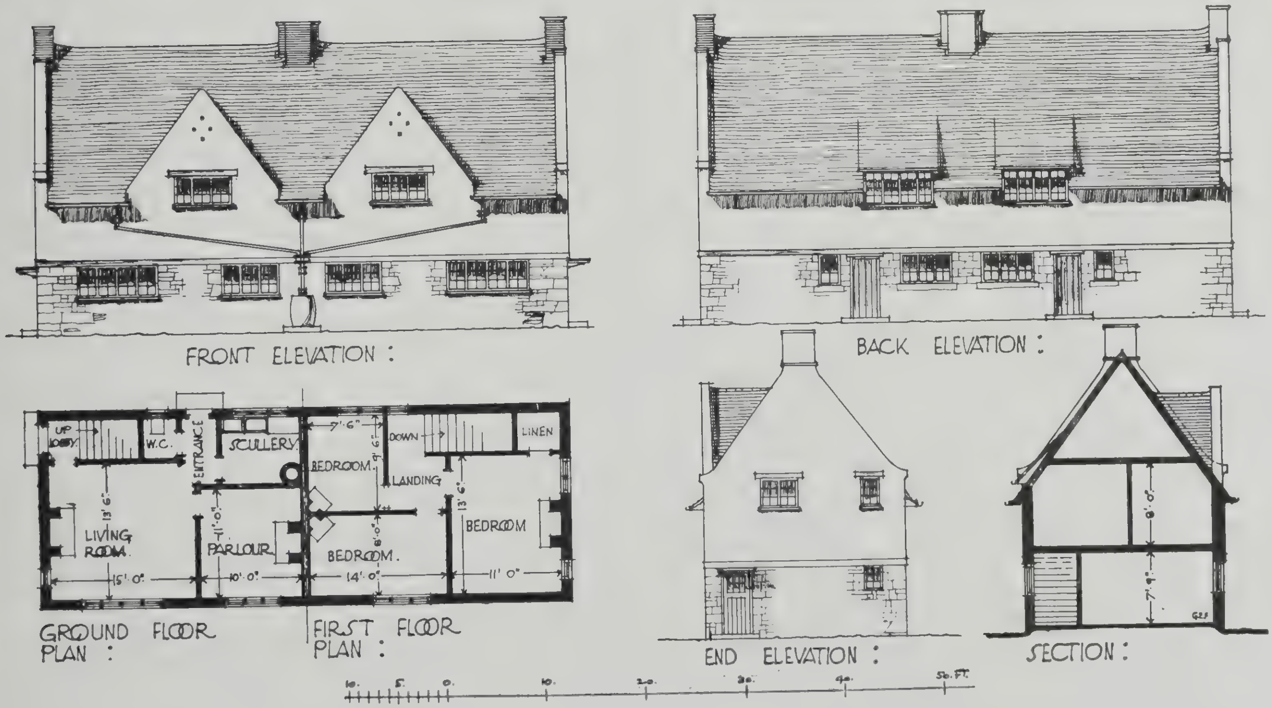
Pentilly Estate Office, near Callington, Cornwall.



House in Doyle Road, St. Peter Port, Guernsey.

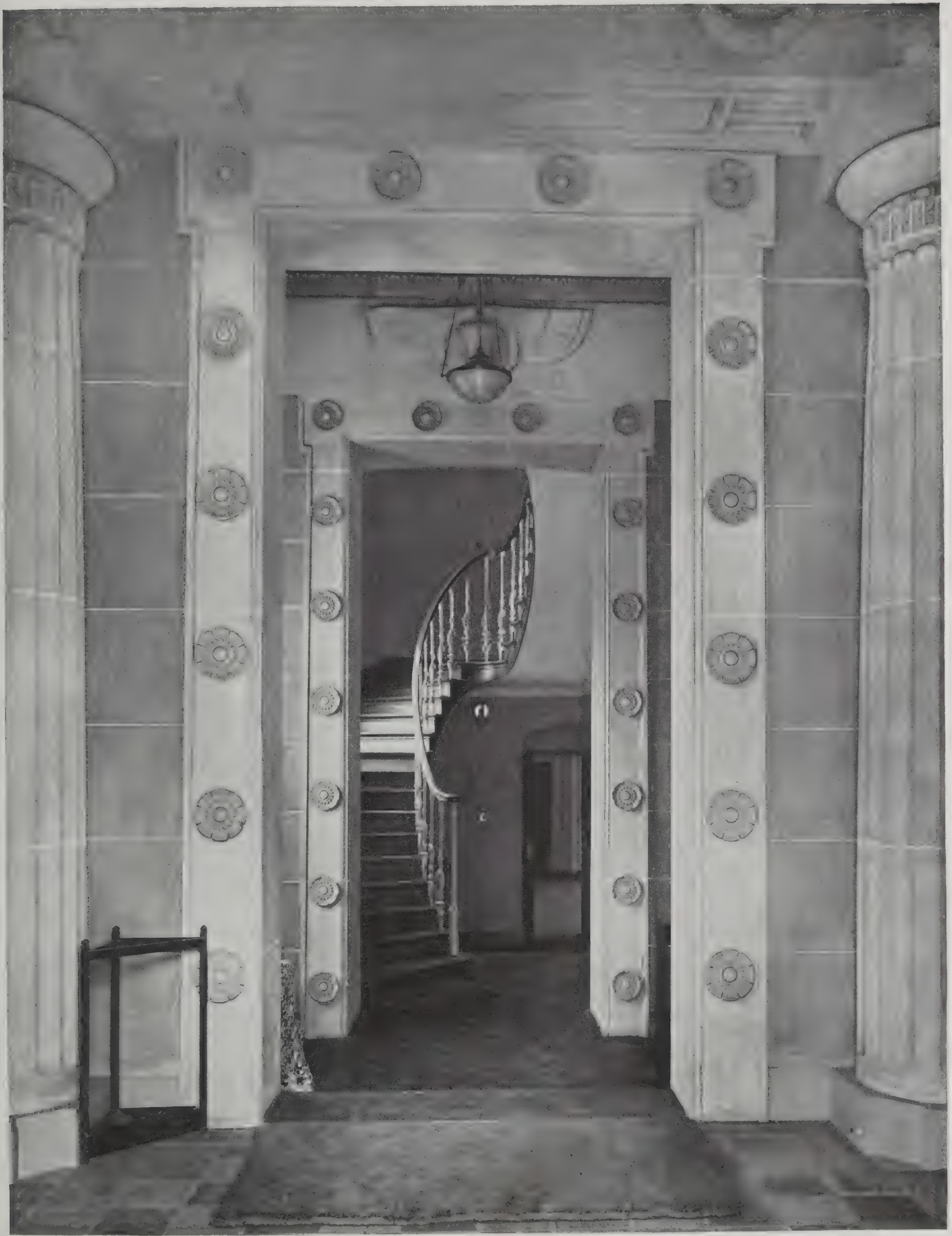
EARLY NINETEENTH-CENTURY ARCHITECTURE—V.





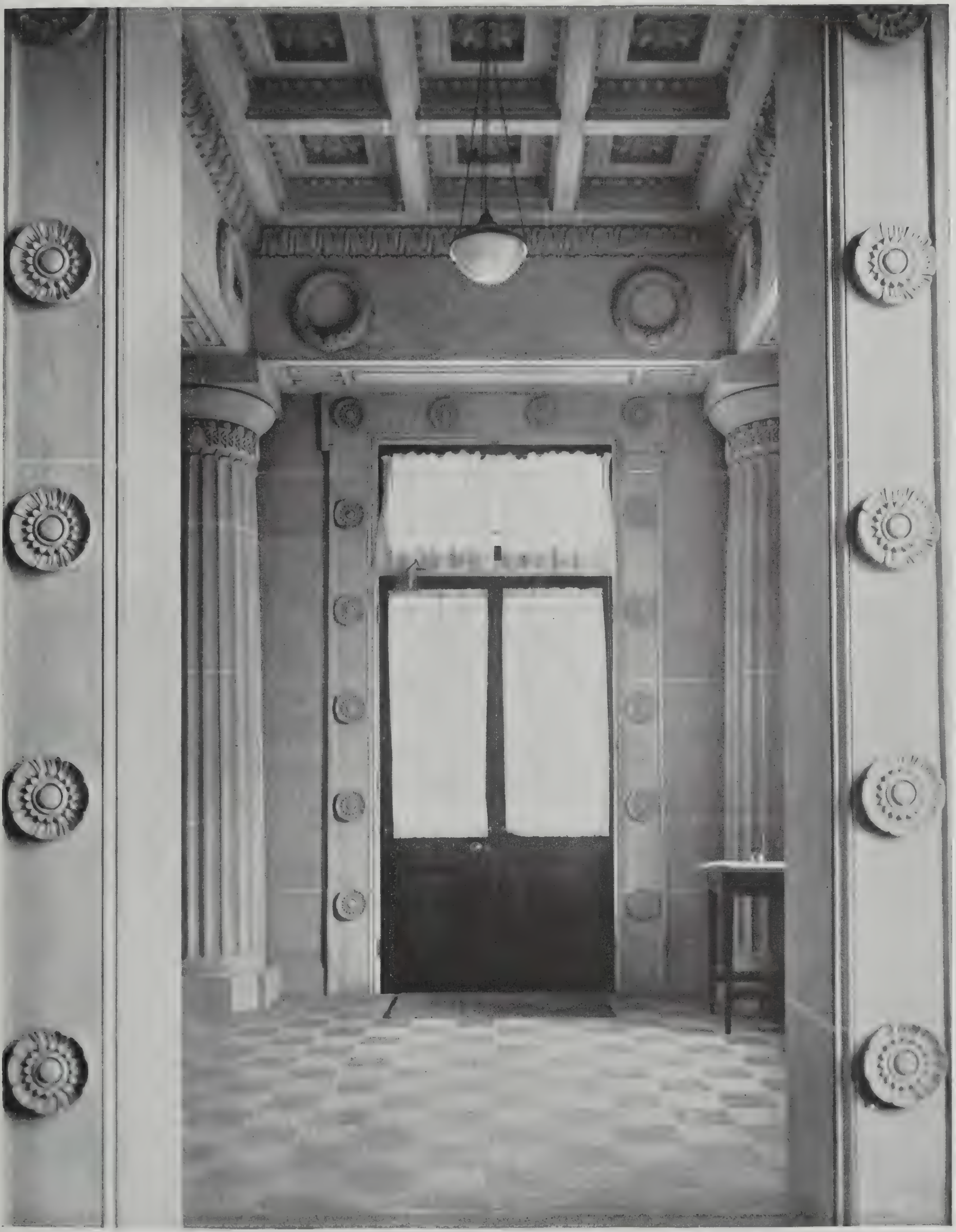
MODERN DOMESTIC ARCHITECTURE. XVIII.– PAIR OF COTTAGES, CRICKET ST. THOMAS, SOMERSET.

CLOUGH WILLIAMS-ELLIS, ARCHITECT.



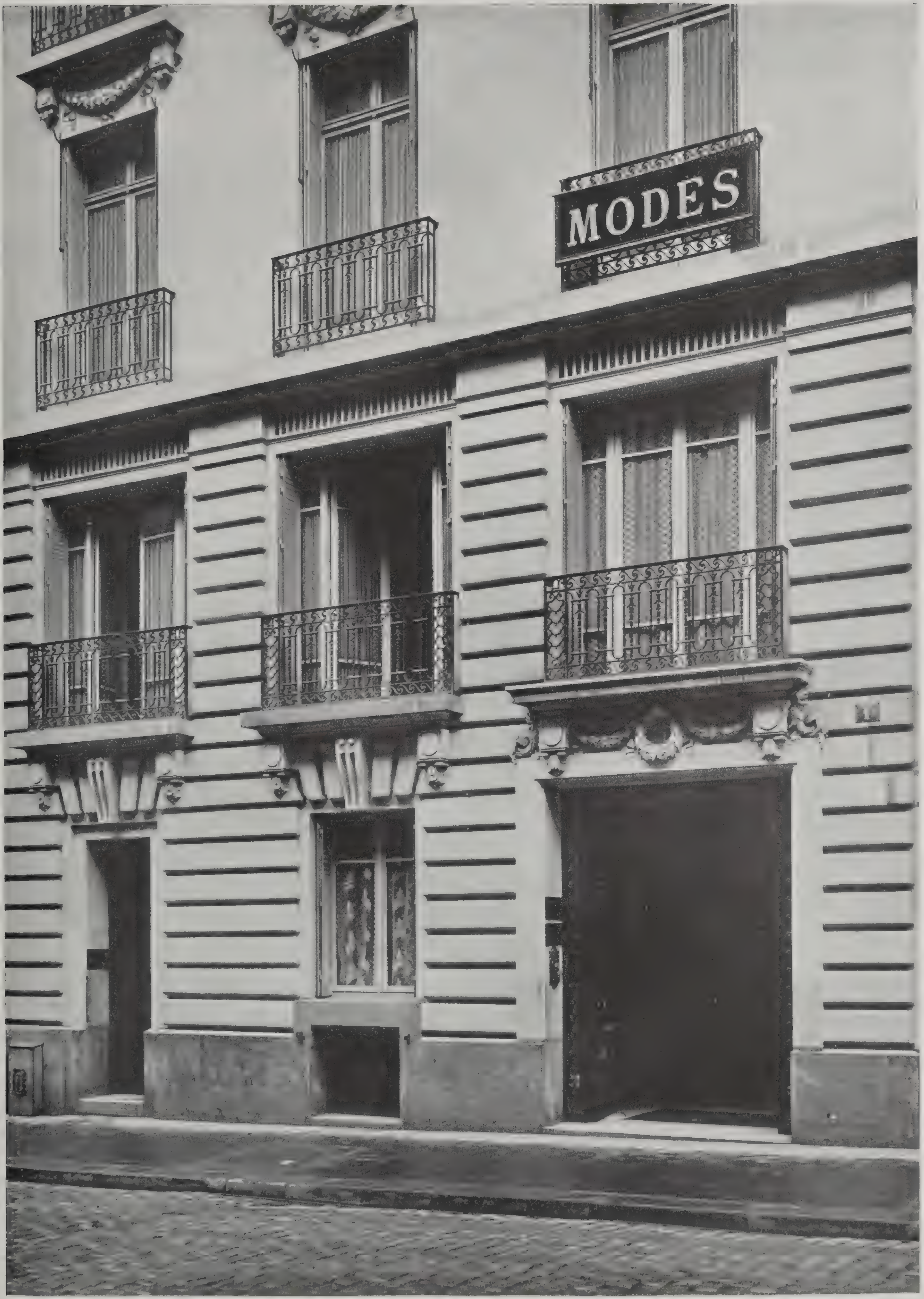
CURRENT ARCHITECTURE. XLI.—THE STUDENTS' UNION, LIVERPOOL: ENTRANCE HALL.

PROFESSOR C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.



CURRENT ARCHITECTURE. XLII.—THE STUDENTS' UNION, LIVERPOOL: LOBBY.

PROFESSOR C. H. REILLY, M.A., F.R.I.B.A. ARCHITECT.



CURRENT ARCHITECTURE. XLIII.—DETAIL OF FAÇADE, RUE RICHEPANCE, PARIS.

UNIVERSITY [illegible]

THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, January 28, 1914. Volume XXXIX. No. 995.

No. 69.

(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

JANUARY 28, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 995.

Architectural Education and the New Charter.

IN view of the fact that the Institute has now definitely committed itself in principle to the policy of securing a new charter from the Privy Council, the moment is opportune to urge that most serious consideration be given to the subject of architectural training as it is to develop in the immediate future. It cannot be pretended that, under present conditions, the pursuit of architecture is accorded due recognition by the public at large. It is, on the whole, less favourably regarded than the practice of dentistry or veterinary surgery, whilst medicine and law occupy a plane relatively so exalted that comparison becomes unthinkable. The treatment meted out to experienced and able architects at the hands of clients, both public and private, is common knowledge. Architects' advice is too often not merely ignored but treated wth open contempt; their status is held to be negligible, to justify the most humiliating interference with the conduct of their work and the arbitrary dismissal of their services just when the latter are in reality most urgently needed.

To lay the entire blame for this state of affairs at the door of the Philistine patrons of our art would be comforting and conducive to the preservation of our self-respect, but we cannot honestly do so. Had the great majority of British architects within the last half-century deserved better treatment they would have received it, and we should not now have to contend with so low a popular estimate of our efficiency. The radical defect, the *fons et origo malorum*, has been the diversity of training, in kind and in degree. The phrase "architectural education" has been used to cover anything, from an acceptance of office routine to a tour of the European capitals, and it has embraced simultaneously such contradictory principles as those of Gothic and Classic art. What has been sown has inevitably been reaped. Of too many architects in practice to-day it can safely be said that their acquaintance with design was either never made at all or occurred under the most confusing and discouraging circumstances. The results have been such as might well shake the confidence of any public.

But conceding so much to be a moderate statement of the case, it might be argued that we are now in a fair way to change all that. The abolition of the old pupilage system is now almost an accomplished fact. Schools of architecture have been established in the chief cities of the United Kingdom. The Royal Institute of British Architects has made itself responsible for a system of examinations calculated to raise the average level of attainment; it has done its utmost to induce as many persons as possible to submit to its tests; and, in recent years, it has, with great advantage, endeavoured to make those tests, in regard to design, conform more closely to French and American models.

We may congratulate ourselves on improvements so considerable. We may also observe that unless these improvements are rapidly followed up by others their value will soon disappear. It is not enough to provide educational tests and in a large measure leave to chance the method of preparation for them. Surely the duty of the Institute is to see that candidates seeking admission should have proceeded to that en through systematic study under the most favourabl conditions. There can be no question as to what constitute those conditions. As America has discovered it is the academic school, with its exceptional facilities which provides the ideal environment for a pursui that is both an art and a profession. Moreover, it i the academic school only which can give the requisit individual status to the members of the profession There can be no doubt that, if it were an invariabl rule for every architect to receive his education at University, the public estimation of architecture woul be raised incalculably. Indeed, it is not too much t say that until some scheme of affiliation is adopted i the case of those schools disassociated from th Universities—that is, until education is uniforml academic and established on a reputable basis—architecture will continue to be regarded as one of th inferior professions.

Now that a new charter is being sought, the time an opportunity have arrived for ensuring the righ development of architectural training in the future Twenty, or even fifteen, years ago the system o "articles" still survived in some strength, and to hav attempted to penalise it, despite its unsatisfactor character, would have been a dangerous policy. To-da that system has become so discredited that the opposition to be anticipated from its defenders is of littl account. The superiority of schools of architecture a training institutions has been too convincingly demonstrated in every quarter—and not least in the spher of the "Testimonies of Study" prescribed for th Institute's final examination. Students are literall being driven to the schools by the logic of facts. The know that education at an architectural school means at the end of their term of training, better financia prospects than any method of desultory independen tuition could secure for them. They know also tha the most certain and rapid way of qualifying as a member of the Institute is *via* the medium of the schools.

It only remains for the Institute to have courag enough to set the seal of its official approval upon thi natural process by making it compulsory, by makin attendance at a school of architecture an indispensab preliminary to membership. And, further, to bring th schools themselves into line and achieve a uniformit of system and a standard that would inspire universa confidence, the Institute should father some schem whereby every school would be connected with University, ultimately to become a regular departmen of that University.

In pressing for the inclusion within the charter o the powers necessary to achieve these objects, th Institute would not be seeking to arrogate to itsel greater rights or more extensive functions than ar possessed and exercised in the case of the medical profession, by the General Medical Council. The latte body admits no degree or qualification as giving a righ to practise unless its acquisition has entailed th attendance of University courses. Private instructio or education at a non-academic institution by itself i not recognised by the General Medical Council. Therein lies the secret of the prestige of the medical profession. It should be the business of the Institute to profit by so successful an example and to secure from the Privy Council the means of emulating it.

In the actual conduct of educational machinery there is much also that may be learnt from the same model. The General Medical Council has consistently fostered its various educational centres at the Universities. Making certain minimum stipulations as to standards to be maintained, it has delegated to them considerable authority, with the most beneficial results. There has been no tendency to over-centralisation, to the imposition of cast-iron regulations. It has from the first been realised that such a course would have been uncongenial to the spirit of British institutions, which require for their healthy development a reasonable degree of liberty.

The moral is obvious. The true interests of architectural education are not promoted by the aggrandisement of a central examining body at the expense of the authorities throughout the country, who are actually responsible for the work of education itself. There should be no difficulty in devising some simple arrangement, analogous to that to which allusion has been made, whereby adequate powers would be delegated to the local centres and a fair degree of representation granted on the Institute's controlling Board of Education to such as possessed endowed professorships and maintained a standard of work satisfactory to the Board. Whilst to safeguard the position of the Institute, it could be provided that the external examiners appointed by the local centres should be approved by the Board.

Certain it is that the whole future of the architectural profession in the United Kingdom is bound up with this question of the development of education. The demand for a new charter affords a great opportunity for the alleviation of our present misfortunes by the settlement of the problem on right lines.

L. B. B.

The National Federation and the London Crisis.

TO-DAY the annual general meeting of the National Federation of Building Trade Employers of Great Britain and Ireland is being held in the Crown Room, Holborn Restaurant, Kingsway, W.C. We are of course writing in advance of the meeting, of which, however, we shall give a report next week. Time and circumstance invest the meeting with more than the usual importance, and the agenda faithfully reflects the current labour unrest, and other topics of immediate and intense interest to the building industry, and, *a fortiori*, to the industrial community at large. A report on the present stage of the negotiations with respect to proposed modifications in the forms of contract and sub-contract will be presented, and its tenour will probably be divulged; but it may be anticipated that a report on the Revenue Bill will be handled with diplomatic reticence, and we shall probably have to wait for information until next session, when the Government will reveal their intentions. There are also being presented a report on "control of trade conditions," and one on railway rates. Discussion of labour matters begins with consideration of a notice from the National Association of Operative Plasterers for an amendment of their agreement, "so as to permit any district to contract itself out like London," and this throws a side-light on the London abour troubles, the dispute with the London Master Builders' Association being complicated by the fact hat the London Association, while not exactly outide the National Federation, enjoys a certain measure of autonomy, and is in fact the older body, if we may egard it as having been formed in 1872, with the itle of "The Central Association of Master Builders of London," the National Association of Master Builders of Great Britain (the forerunner of the National Federation) having been formally constituted at a meeting held at Crewe on January 3, 1878. It was on January 30, 1900, that the National Association changed its title to the National Federation, which held its first meeting under that name on February 20, 1901. As the independence of the London Association is manifested in its attitude towards the National Conciliation scheme, the point of the plasterers' notice becomes obvious, and it also makes more clear the present position with regard to the London labour crisis. It had been supposed that the National Scheme of Conciliation had abolished strikes; but the Millennium is not yet—the love of fighting may have been scotched, but is not killed; for one of the items on the agenda concerns a notice of withdrawal by the Operative Bricklayers from the conciliation scheme, and an even more significant entry is "As to what action should be taken where members of operative unions which have entered into working agreements with employers' associations resort to strikes instead of first referring the disputes to conciliation." It is precisely this tendency towards wanton breaches of agreement that has stung the London Association to drastic action; and the occurrence of such outbreaks, in spite of the Conciliation Scheme, negatives any suggestion that the London crisis could not have occurred under the Federation Scheme, and greatly discourages any proposal that might otherwise have been advanced in favour of applying that scheme as a means of preventing the fight. As everybody foresaw, the workmen have refused to sign away the principle of collective bargaining. No one could have imagined for a moment that they would consent to destroy their unions by a stroke of the pen; and it at once became only too obvious that if the men could manage to convince the public that their objection to this form of happy despatch was the immediate cause of a lockout, they might succeed in getting themselves regarded as martyrs to principle, and the moral effect which seems to be the aim of the employers would lose most of its force. At the time of writing, while both sides remain outwardly obdurate, there are indications that both are anxious for some *modus vivendi*.

Trusts and Preferential Dealing.

ALLEGATIONS as to the tyranny of hardware and other trusts are still being very industriously circulated, and the virtuous indignation against them is not confined to those firms which are anxious to have it known as widely as possible that they are independent of these organisations. At least one firm of architects have written to confirm the statement that "there has been a most regrettable attempt to close all free markets in this country, more especially in iron and sanitary goods required for a building." Brickmaking trusts are also alleged, and it is asserted that trusts in general "have increased the cost of building by quite 15 per cent. in the last three years, quite apart from the rise in labour, which has also militated against building speculation." This, according to the view of a financial contemporary, is a very modest estimate, as, in regard to some items, it is declared, the increase enforced by trusts amounts to 100 per cent, while "a fair average would probably work out at about 40 per cent. increase all round." It is also suggested that "one hundred million pounds is the capital represented in the Combine of Combines which is enveloping the building requisites trade." "'Tis a good round sum," and its exuberance suggests that the whole matter is being somewhat exaggerated. That trusts or rings exist, and that their main object is to sustain or to increase prices, and at the same time to take measures for rendering outside competition more or less futile, is unquestionable. It is equally certain that, as Thomas Henry Buckle showed, power is almost invariably abused. To prevent the formation of trusts is impossible; but to curb their more flagrant abuses of power is a duty that is nearly always essayed with sufficient success to reward the effort. Organisation, whether of workmen to secure due consideration for the claims of labour, or of traders to protect themselves against the evils of unregulated or inordinate competition, is legitimate and of ethical and economic value as long as it remains purely defensive; but there is always the danger that it might at any moment develop into aggressiveness. But when it threatens to become rampantly dictatorial, it is simply taking the most effectual means of procuring its own dissolution. In this country, at all events, the yoke that galls is not long tolerated, and from the moment a trust becomes tyrannical it begins a rapid descent to Avernus. Public opinion is too strong for it. On a fair view of the whole question it should be recognised that builders themselves are to a considerable extent addicted to preferential bargaining with traders. Whether their local organisations are made the instruments of "mutual consideration"—that is, of dealing preferentially with firms that are admitted to some form of membership, to the exclusion of other firms that have not this nexus; or whether the individual builder has placed himself under some pecuniary obligation that ties him to certain traders: the principle or the spirit is much the same as the underlying force of rings, cliques, and trusts. The builder who is thus tied down to arbitrary conditions is hardly consistent in his indignation against the adoption and extension of somewhat similar methods by trusts; and it is a fair question whether all these constant and variegated abnegations of the ideal of "a free and open market" have not conduced materially to the formation of trusts, which may be assumed to represent, in effect, a counter-movement in the gentle art of gerrymandering.

The Victoria Memorial.

LAST week "The Times" published Lord Esher's Report to the King of the completion of the Victoria Memorial. The Report naturally lays stress on the personal interest taken in this work by the late King Edward; offers graceful compliment to Sir Aston Webb and Sir Thomas Brock; and, with reference to the scheme having been carried out without resort to a further appeal for funds, departs so far from official usage as to pay tribute "to the forbearance and straightforward personal loyalty to your Majesty of the artisans and men employed on the work." The Special Committee "were sustained throughout by the principal organs of the Press, representing on the whole the satisfaction of the citizens of London with the Memorial planned and erected to the memory of their illustrious Sovereign." This statement hardly accords with our memory of what was written at the time on the statuary and its architectonic setting, which, indeed, provoked a considerable storm of hostile criticism. This was directed mainly against the uninspired conception and timid symbolism of the monument itself; but there were not wanting critics who condemned the whole scheme, root and branch, even unto the background, the Buckingham Palace façade. Yet it must be admitted that the voice of criticism, though it was raised very loud, was not maintained for very long, and Lord Esher's Report, issued thirteen years after the scheme's inception, finds the finished result "accepted" by the vast majority. If this acceptance is partly due to the fact that other matters have arrived to occupy the stage of public attention, a reason for it may also be found in the recognition that, apart from details, the Memorial does not take its place at all badly in the general scheme of the Mall improvement, to which it is closely related. It might have been better done, it may even be inartistic in its details; but its outlines undoubtedly gain a sort of dignity from its position at one end of the fine new processional thoroughfare, of which the Admiralty Arch, also considerably criticised, is the other end. That and the comparative innocuousness of the Memorial itself probably supply the reason why we have got used to it a good deal sooner than a previous generation could have grown accustomed to a startling and anomalous structure (such as, say, Street's Law Courts) suddenly introduced into their architectural peace.

The Future of the Surrey Side.

AT a dinner given last week by the London Society at the Waldorf Hotel, Sir Aston Webb entertained the distinguished company with an address in which he drew a dream picture of London in 2014. Part of the picture was serious and part humorous, and part contained suggestions in civic planning, which, remote as they are, have already provoked some discussion. Amongst other details, for instance, Sir Aston Webb sees Southwark converted into a new Strand, and the Surrey side of the river an Embankment corresponding to that existing on the opposite shore. A leader-writer in "The Times" has seized upon the latter suggestion as an occasion for protest. He questions whether "splendid buildings" and "picturesque warehouses," "however deliberately picturesque," will "replace what might almost be called the natural beauty of that jagged line of chimneys and towers and roofs which now delights the eye." "The Surrey bank is the visible sign of London's spirit. . . . Destroy her Surrey shore, and she will be so much the less London, so much the more a mere great city," etc. Now, anyone with an eye for the picturesque will sympathise with this writer's anxiety to a certain extent; but it should not be forgotten that this identical problem has presented itself to town reformers and re-planners from early times, and that it has often been solved with remarkable success. In the case of London, and bearing in mind the importance of building nothing that tends to injure or destroy the intangible but profoundly felt spirit of the city's being, the difficulty is greater than elsewhere, but not, we think, insuperable. Wren had to face it when, in rebuilding the London churches, he virtually rebuilt London; and though one may doubt his full consciousness of the subtlety and danger of his task, one can at least judge from his results that he was fully aware of the æsthetic value of a boldly broken skyline.

Minor Points in Domestic Planning.

IN a note on this subject last week we called attention to the desirability of planning small houses more in accordance with modern requirements. This subject is dealt with at considerable length in a specia article on "Planning the Suburban Middle-class House," contributed by Mr. Edwin Gunn, A.R.I.B.A. to the newly issued volume of "Specification." Having traced the evolution of modern planning, which he illustrates with about a dozen diagrams, the author gives a short list of new factors which the architect or the surburban middle-class house has been slow to take into account. These are: (1) The servant problem is becoming so acute that many families now deliberately desire to do without one. (2) Grown-up daughters commonly go into business rather than remain as domestic drudges. (3) Gas-cooking and heating are increasingly popular. (4) Almost every house requires space for one or more bicycles. (5) In a house where no servant is kept, the chief ordinary use of a second living-room is for children's homework and the reception of occasional visitors. Where a servant is kept, i may serve in addition as an actual dining-room. (1 and (2) may partly account for the thousands o unoccupied "commodious" houses that are such a sore burden to the rates in the remoter suburbs, where smaller and more compact houses let readily at much the same rents. It is evident that the modern architect must needs be something of a sociologist, and that the whole art of domestic planning is no longer comprised in the old cynical admonition "to put in plenty o cupboards."

CREATION OF A WORLD CENTRE OF COMMUNICATION.—1.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS.

THIS volume* is one foot broad, one foot six inches long, and it weighs ten pounds. It is obvious, then, that if it has a corresponding spiritual ravity it cannot be treated with too much deference.)ut of a very much smaller work entitled "The 'ountain of Life" it grew to its present enormous size. Io critic, however, must suffer himself to be overawed y mere dimensions. Too many books, especially on rt subjects, have kept on growing when they ought ever to have grown; it would have been better if they ad got smaller and smaller in their authors' hands ntil nothing was left of them at all. Essays containing ut a tiny fraction of an idea which one might expect find in an ephemeral pamphlet are eked out with llustrations and inflated eyond measure until they inally appear as ponderus folios decked in regal tyle as if they were fit to e an eternal possession. ut in the present case the nlargement was justified, or the volume before us is ot only more imposing han the smaller one from hich it sprang but is icher in substance; the natured conception of a Vorld Centre is of far reater significance than ne quite arbitrary symbolsm that marks the designs or "The Fountain of ife." Of the huge tomes eposing in our architecural libraries not many ould be found that reprented so much industry as ne present one. It is, noreover, exquisitely rinted and a monument to ne public spirit of whoever responsible for its proluction, for it is impossible believe that any finanial profit is likely to ccrue therefrom.

We shall offer no excuse or making but a passing eference to the long premble of the book, for we hall return to this later. he problems under disussion will be more clearly rought before us if we turn at once to M. Iébrard's magnificent bird's-eye view of "The Vorld Centre." Whereas in creation one must onsider general principles first and then make the esign an illustration of them, in criticism it is desirable direct one's attention immediately to the particular ing created in order to interpret such principles as re inherent in it. People often apply their own anons to the works of others without having first ttempted to discover the canons that have determined e form of the works themselves. It is just as if one ere to find fault with an apple-tart because it has not l the virtues of a plum-pudding. If we wish to be ust we must begin by criticising it as an apple-tart; e are at liberty afterwards to suggest that a plumudding would have been more appropriate.

M. Andersen's super-metropolitan ideal is wellnown to all students of town-planning, as are also M. Hébrard's very original designs for traffic-centres and other features of the modern city. The present conception seems to owe a great deal to these earlier experiments, for the most conspicuous thing in the design is really little more than an enlarged junction of roads, a "round-place" upon a big scale. In the opinion of its authors it represents the very pivot of civilisation, "a fountain of overflowing knowledge, to be fed by the whole world of human endeavour in art, science, religion, commerce, industry, and law; and in turn to diffuse throughout the whole of humanity as though it were one grand, divine body conceived by God, the vital requirements which would renew its strength, protect its rights, and enable it to attain greater heights through a concentration of world effort."

M. Andersen goes on to explain that the International Centre which forms the heart of this great capital comprises three parts—a Physical Culture or Olympic Centre, an Art Centre, and a Scientific Centre.

The Olympic Centre consists of a colossal Natatorium facing the sea, and a very large Stadium. To the right and left are Gymnasia for men and women. In the Art Centre there are a central Temple of Art, a Conservatorium for Music and Drama, and museums, schools, and libraries that appertain to these. The Scientific Centre is dominated by the Tower of Progress, over a thousand feet high. At its base is a World Press which "could receive and rapidly distribute throughout the world all knowledge of vital importance." Surrounding this are four International Scientific Congress buildings, while to the right and left are the Temple of Religions and the International Court of Justice crowned with symmetrical domes. A concise epitome of "world effort"!

Let us assume for a moment that it is both possible and desirable for such a city to come into being, and that it should contain all the buildings M. Andersen mentions. We must consider how far these latter have been harmoniously arranged. The question as to whether they would subserve a real human need will be dealt with later.

The first thing that strikes one on looking at the bird's-eye view is the gigantic scale upon which the World Centre has been conceived. M. Hébrard has provided us with a fascinating prospect and one which excites admiration without bewildering the eye. His plan is extremely simple in structure; the colossal Tower of Progress dominates the scene, while the broad "avenues" which lie between it and the Art Centre do much to give form to the city. It may be objected that the Olympic Centre is somewhat cut off from the main scheme, and that the Stadium blocks the view of the city from the harbour. It is easy to make this kind of criticism. Most designs, however, must be a compromise. If we had had an uninterrupted view of the Tower of Progress from the sea, the Temple of Art could not have been so admirably placed at the end of the Avenue des Nations. In a large metropolis one must not demand too great a measure of cohesion; much has been achieved if there is an ordered arrangement in a limited central part. In this case it is obvious that the Olympic Centre has to be regarded as an extraneous element. The area between the Tower of Progress and the Art Centre, having the Palaces of the Nations on either side, attracts one's attention immediately as a self-contained whole. It is the most important part of the city, and it is to this that criticism must be directed. There is a change of terminology which must be suggested here, for although at first sight it may appear trivial, one's attitude to the plan is profoundly affected by it. The expression "avenue" is somewhat misleading, for the thing which the word connotes in this instance is not an avenue at all, but a long rectangular place. If we had before us the Scientific Centre and the Art Centre with nothing but avenues between them, the virtue of unity would be entirely absent; we should have a duality, two separate entities joined together by a thread, and the eye would travel from one to the other and would find no final resting place. The present writer has no exact knowledge of the manner in which M. Hébrard's conception grew, but from the evidence before us it seems probable that he began by making a fairly narrow link between the centres, one which might truthfully have been called an avenue, and that afterwards his æsthetic sense compelled him to broaden it considerably until eventually he arrived at this rectangular place, which has a far greater right to be considered the real core of the city, the simple elementary form which gives it cohesion, than has the Tower of Progress; for the latter is nothing but an enormous spike which, in spite of its height, accentuates but a very small area of ground. What we have is a long place broadened at each end and surrounded on all sides by public buildings. Unfortunately the Palaces of the Nations situated upon its flanks appear to have been designed before the avenue changed its character and developed into a place. They are disposed in an irregular way, half them being recessed back a considerable distance, that the area bounded by the buildings is of no obvio shape. This results in a loss of dignity, and althou the Palaces of the Nations may be beautiful in ther selves, they do not together comprise a harmonio whole. It may be said that if they were given a sing alignment, the effect would be one of dulness. Th objection is undoubtedly a true one, and it emphasis the fact that there is a certain limit to the size of formal place, a limit which in this instance has be exceeded. An avenue can be of a great length becau it is only a joining member, but when we are deali with a piece of ground which has to be considered a unity, it ought not to be so large that the ordina pedestrian cannot sum it up. The practice of maki bird's-eye views is not without its dangers. Former it was often complained of architects that they design their buildings without reference to what was adjo ing, and had no eye for a big composition; it is qu likely that in the future they will be taken to ta because their compositions are on such a scale that o people in aeroplanes would be able to take pleasu in them.

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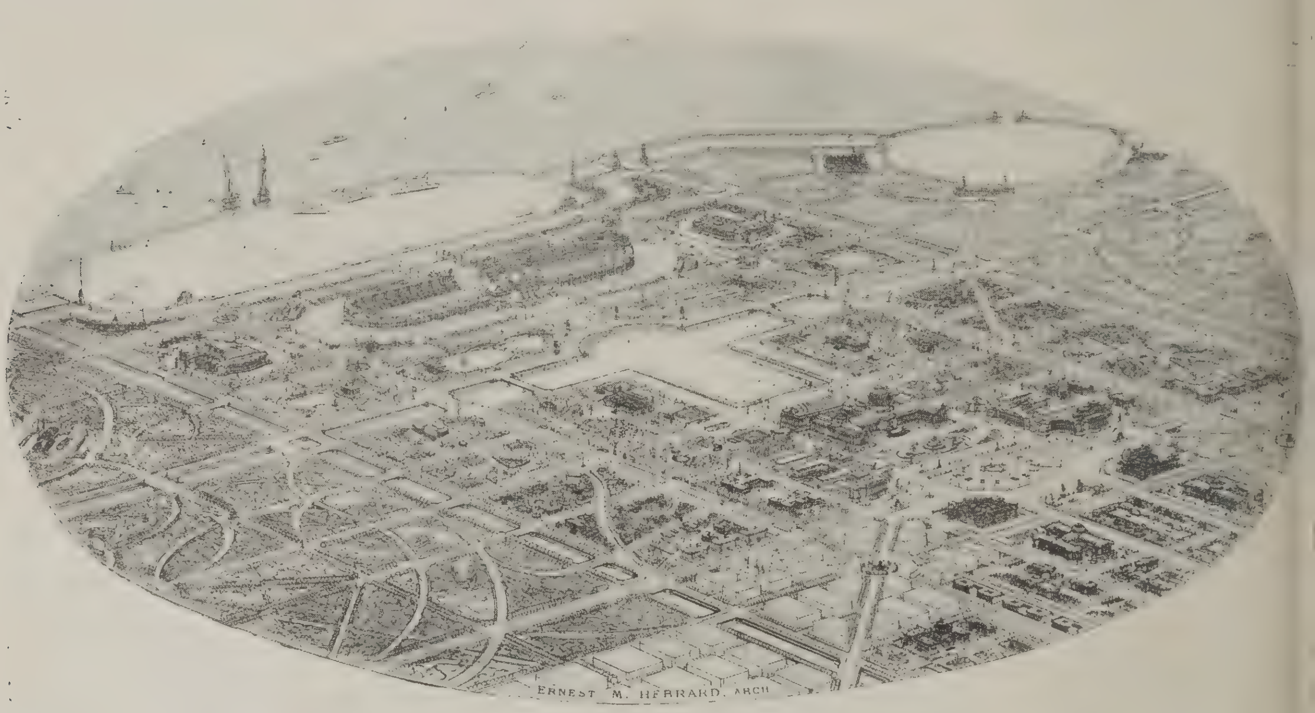
* "A World Centre." H. C. Andersen. Paris, 1913.

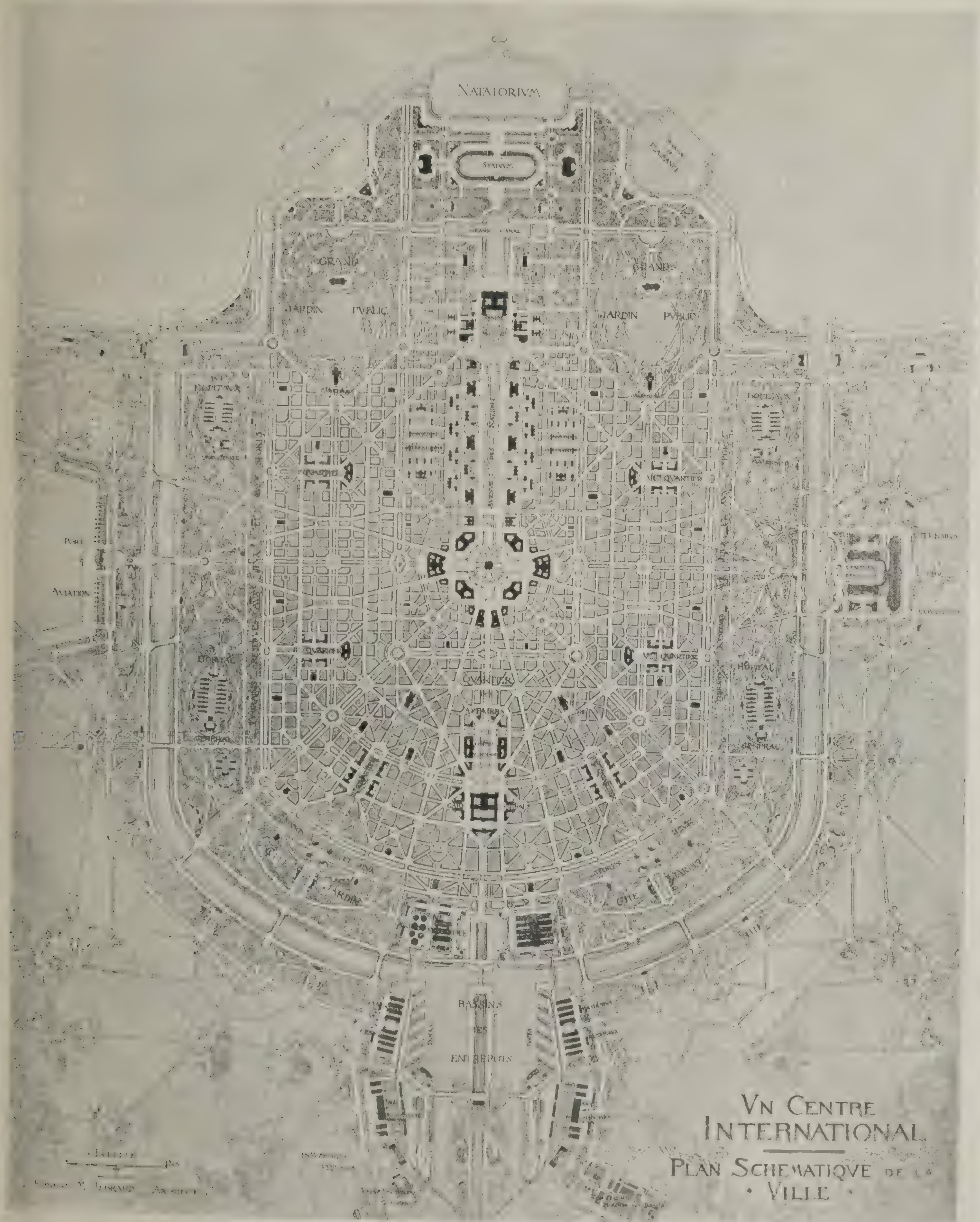


BIRD'S-EYE VIEW OF SCHEME FOR A WORLD CENTRE OF COMMUNICATION.

CONCEIVED BY HENDRIK CHRISTIAN ANDERSEN AND DESIGNED BY ERNEST M. HÉBRARD, ARCHITECT.

An extensive arrangement of formal architect never fails to express the power and importance of t community that has brought it into being. But t love of grandeur sometimes develops into mega mania, and we have a fatal transition very like th between the sublime and the ridiculous. No city pla should be so immense that it cannot be bounded buildings that form a group whose significance can grasped at once. It is hardly desirable that such formation should attain a size greater than that of t paved court before the Palace at Versailles or t Place du Carrousel in front of the Louvre. The lat is 500 metres long, and even in this instance, when o stands on the site of the Tuileries, the general compo tion suffers because the more distant buildings, such the central Pavillon Sully, seem too small to play th appropriate part in the scheme. This criticism appl still more aptly to M. Hébrard's rectangle, which over a mile long.

There is another reason why the unit of desi should not be extended indefinitely. Many a stat abric reflects glory upon its creators, but when the ld ambition of artists leads them to erect structures o colossal that men or women look like insects beside em, the main purpose of art will not be fulfilled. For he purpose of art is to endow matter with mind, and his cannot be accomplished if mind is brought into isrepute, as is certainly the case when human beings, e highest incarnation of mind, are themselves umiliated before huge creations in stone. This is an nsult, not to any individual, but to the humanity which common to us all. It is natural, of course, that the ndividual should be conscious of his own subordinate position when in the presence of some vast assemblage of public buildings that expresses the majesty of the State to which he belongs; in this instance, however, a sense of his own comparative unimportance is accompanied by one of exaltation in that he is a member of an august society. The magnificence of the whole sheds lustre upon the parts. But our spirits are not elevated when architectural fabrics are allowed to attain such dimensions that our bodily forms are made to appear mean, petty, infinitesimal. It is necessary for the welfare of an animal that it retain a pride in its own type and species.



PLAN OF SCHEME FOR A WORLD CENTRE OF COMMUNICATION.
CONCEIVED BY HENDRIK CHRISTIAN ANDERSEN AND DESIGNED BY ERNEST M. HÉBRARD, ARCHITECT.

Many people hold that even St. Peter's Cathedral is too big and has not so much dignity as St. Paul's, which is far smaller. The grandeur of the Pyramids may doubtless be cited, but the Pyramids have all the simplicity of mountains. They are the decoration of a desert. A solitary monument may be as gigantic as we please, but when a dwelling place is unduly inflated we have a repetition of elements which becomes exceedingly wearisome to the eye unless those elements are disguised and obliterated. No façade ought to be increased either in height or breadth to such an extent that the windows, the visible symbols of the human use to which the building has been devoted, lose their identity as windows and become insignificant factors in an immense pattern. This is what has certainly happened in the Tower of Progress. The tower is too big, and the main unit of the city is also too big.

THE PLATES.

Design for an International World Centre.

THE first part of a full discussion and criticism of this design, in which M. Hébrard expresses the idea of an international world centre, appears immediately above (pages 59-62). The plate we publish gives a bird's-eye view of the city of M. Hébrard's conception, and should be studied in conjunction with the illustrations in the text.

Students' Union, Liverpool: Façade to Women's Wing, Mount Pleasant.

An account of the new building which Professor Reilly has carried out in Liverpool has been given in previous issues. The façade to the Women's Wing shows the application to the exterior of the Neo-Grec principles controlling the treatment of the entrances and rooms.

Students' Union, Liverpool: Women's Reading Room and Lounge, Ground Floor, and Room on Top Floor.

The upper of these plates illustrates the room on the second storey of the Women's Wing of which the windows are seen in the foregoing plate of the façad The lower plate is an interesting example of dome co struction and of the arched recess.

"The Thatched Cottage," West Byfleet, Surrey

This house, of which we give a ground plan a elevations, stands back about 80 ft. from the ro known as Old Avenue, Byfleet, and was built with view to economy in upkeep. The architect was M G. Blair Imrie, of London, and the builder was Mr. G. Tarrant, of Byfleet.

Detail of Doorway in Vestibule de Harlay. Palais Justice, Paris.

M. Duc's work in the Neo-Grec needs no furth comment in this column. The interest of the plate publish lies in the richness of the sculptural detail a its adroit application to architectural features.

Design for a Monumental Building Commemorati the Adoption of the Greenwich Meridian.

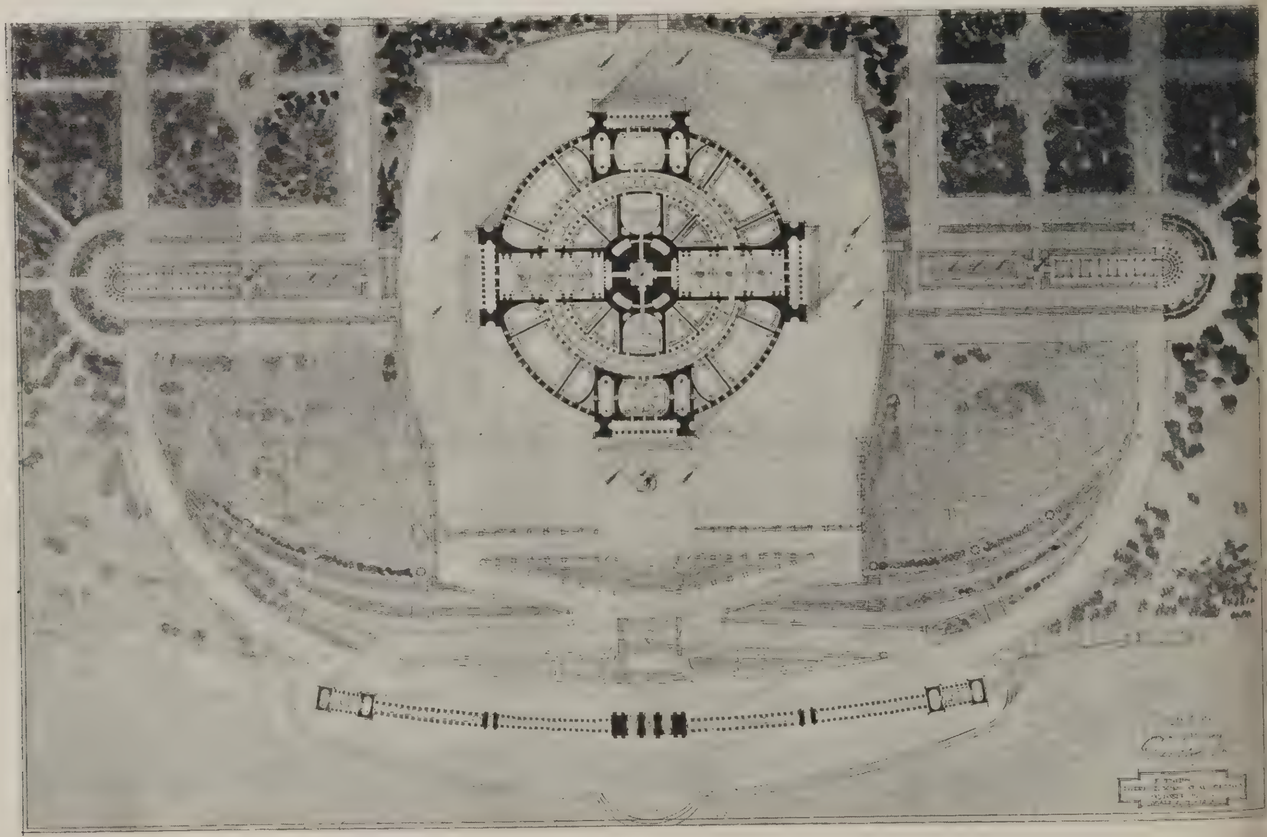
This design was made by Mr. F. Jenkins, a stude of Liverpool University, and shows in its conceptio pronounced feeling for monumental architecture. a drawing, also, it is fine in detail.

Doorway, Mason Library, Great Barrington, Ma

We publish this working drawing, which is the wo of the well-known American architects, Messrs. Bla chard and Barnes, as a good example of the Americ system.

INDEX TO THE PLATES.

THE Index to the Plates published in T JOURNAL, October 1st to December 31st, 19 is now ready, and can be obtained by sendi two penny stamps to the Publishers, THE ARCHITEC AND BUILDERS' JOURNAL, Caxton House, We minster, S.W.



DESIGN FOR MONUMENTAL BUILDING COMMEMORATING ADOPTION OF GREENWICH MERIDIAN. BY F. JENKINS.

HERE AND THERE.

WHAT shocks the architect is heir to! Here is a creed which we all thought had been decently dead and buried years ago, yet which now is a champion to bring it forth anew. This time it Ir. Baillie Scott who is, I will say, its champion. In sedate surroundings of a Carpenters' Company ure he has put on the ancient war-paint and the hers, and, with a whoop, has proceeded to destroy architectural myth. Let me recount, briefly, his version of the affair. Planting his feet firmly on *lding*, he says, first of all, that the system which duces the modern architect "as a highly specialised gentlemanly sort of person ruling lines in an e" is a pernicious one. It was wholly unknown in halcyon days of the mediæval guilds, when "the tors of buildings" derived their inspiration from intimate knowledge of materials which can only be ined by constant association with them, whereas ay the architect is left all alone in a paper world, education being centred on impossible and racticable schemes—designs for royal palaces and memorative monuments. Instead of this sort of g he ought, like the engineer, to spend some years orking with his own hands on the materials he will to deal with, thereby gaining for himself an nate knowledge of the crafts, and, incidentally, is own example, helping the carpenter, the stone-on, the bricklayer, the decorator, to what varied ibilities of individual expression are within their h. So away with this thraldom of the drawing-d, and let the architect find a new liberty in LDING. And the cottage is to be the essence of ings, says Mr. Baillie Scott. "Take care of your ges and your palaces will take care of them-es." Are not our old villages a shining model "of simple and unaffected beauty which was gained he work of men who merely worked out their lems in direct and obvious ways, and who went er to Greece nor Rome, but obtained their inspira-from their materials and the conditions of the cular problem in hand"? The same should be glorious aim to achieve also, keeping ever before mblazoned on our banner, the two maxims—ate with joy" and "Defend beauty."

his is the indictment, this the panacea for the ills uffer. But we have seen it all before. It is notion that the old cathedrals might have us modern rivals if only the architect would me a Socialist, take up chip-carving, and able to lay bricks with the best of them. I freely concede that the architect can never know uch of the materials and the practical methods of ing which come ultimately under his direction, and time spent on the job and in the workshop is time spent. But I soon come to my limit in this, more ially as under modern conditions of building the ination of architect-workman would be both futile ludicrous. Moreover, the architect is not wholly ged in building cottages on rural sites. How is he anage when, in his dual capacity of designer and man, he sets about a block of flats in Victoria t? I think it would be quite humorous to watch like the old abbot-builder, adding a room here or r there as he felt the inspiration of the site and naterials working within his breast. Building d then become a new mystery, which owners of rty would take up in a sporting spirit, not know-eforehand what they were going to get. No, it ot do. The "back to the cottage" idea will never anything but an absurdity, and those maxims, ate with joy" and "Defend beauty," are no more pretty phrases which nobody is impressed with.

* * * *

e musings over that old question "What's in a name?" are so charged with platitudes that it is with some qualms of conscience one ventures to refer again to such a threadbare subject. Yet there are cogitations over Christian names and surnames in the realm of architecture which are worth a passing mention. It is curious how certain architects are invariably referred to by their Christian name or names in full, others by their initials only, others again by their surname alone, and still others by various combinations of initials and names in full. The use of any other than the titles we are familiar with gives them a queer look. Thus, we know "Wren" and "Sir Christopher Wren," but not "Sir C. Wren"; "Pugin," "Augustus Welby Pugin," but not "A. W. Pugin." "Inigo Jones" we insist upon, "Jones" and "I. Jones" being unknown personages. And if we turn to architects of the present day the same associations hold good. Take those whom we know by their Christian names, such as Sir Aston Webb, Sir Ernest George, Mr. Detmar Blow, Mr. Arnold Mitchell, Mr. Paul Waterhouse, Mr. Leonard Stokes. Who are Sir A. Webb, Sir E. George, D. Blow, A. Mitchell, P. Waterhouse, L. A. S. Stokes? On the other hand, who are these—James Glen Sivewright Gibson, Edwin Alfred Rickards, Alfred William Stephens Cross, Charles Henry Bourne Quennell, Charles Edward Mallows, Herbert Winkler Wills? They look strange enough when thus confronting us in their fullness, but when abbreviated into their customary initials we recognise them at once as Messrs. J. S. Gibson, E. A. Rickards, A. W. S. Cross, C. H. B. Quennell, C. E. Mallows, and H. W. Wills. And there are all sorts of interchanges between full Christian names and initials only, any form of which other than the familiar one makes them all strangers to us. Thus, there is Mr. E. Guy Dawber, but no Edward G. Dawber; Mr. Gerald C. Horsley, but no G. Callcott Horsley; Mr. William A. Pite, but no W. Alfred Pite. So that, though there may be nothing in a name, we cannot get away from the accustomed form without feeling all awry.

* * * *

When I turn over the French architectural and building papers I sometimes come upon a name or a term which, though I do not instantly recognise it, has a sort of familiar air, and then a moment's reflection reveals to me the good plain English (or American) underneath. English words transmogrified into French, or French words into English, have a strange appearance, whichever side of the Channel we happen to be on, until we get accustomed to them. I add this proviso because we have only to recall such words as "cinematographe," "garage," "chauffeur," and "foyer" to see that French words soon settle down into our own vocabulary, just as Frenchmen may feel quite at home with the "boxe," "football," and "biftek." But there is no regular system in all this. "Elevator" in New York finds no euphonic resemblance in the London "lift," and Paris has "ascenseur" as its own distinct term. Nevertheless, there is no gainsaying the queer look of metamorphosed words which are not in common use in their native country. Hence I hardly recognised the well-known title of the National Radiator Company in "La Compagnie Nationale des Radiateurs," and "le chauffage à vapeur basse pression" struck me as a technical phrase peculiar to French heating engineers until I took the trouble to see that it was no other than our old friend, so familiar in the newspaper descriptions—heating by low-pressure steam. But the palm must be given to this heading to an article in "L'Architecte"—"Le plus haut 'gratte-ciel' d'Europe." Thus does the sky-scraper get a new reputation in the mouths of strangers.

UBIQUE.

BOOK NOTICES.

Esoteric Architecture.

We have received for notice the January issue of "The Philosophical Path" (International Theosophical Headquarters, Point Loma, California), with special indication of an article entitled "Studies in Symbolism.—1. The Doric Order in Architecture." This article begins with a citation of Robert Louis Stevenson's "Memoir of Fleeming Jenkin," in which it is related that at one time Jenkin "spent three nights a week with Dr. Bell, working away at certain geometrical methods of getting the Greek architectural proportions," Dr. Bell having hit upon the singular fact that certain geometrical intersections gave the proportions of the Doric order. Stevenson adds: "Fleeming, under Dr. Bell's direction, applied the same method to the other orders, and again found the proportions accurately given. Numbers of diagrams were prepared; but the discovery was never given to the world, perhaps because of the dissensions that arose between the authors. For Dr. Bell believed that 'these intersections were in some way connected with, or symbolical of, the antagonistic forces at work'; but his pupil and helper, with characteristic trenchancy, brushed aside this mysticism and interpreted the discovery as 'a geometrical method of dividing the spaces, or (as might be said) of setting out the work, purely empirical, and in no way connected with any laws of either force or beauty.'" Thereupon the author of the article quotes Madame Blavatsky: "It is Vitruvius who gave to posterity the rules of construction of the Grecian temples erected to the immortal gods, and the ten books of Marcus Vitruvius Pollio, of one, in short, who was an initiate, can only be studied esoterically. The Druidical circles, the Dolmen, the Temples of India, Egypt, and Greece, the Towers, and the 127 towns in Europe which were found 'Cyclopean in origin' by the French Institute, are all the work of initiated Priest-Architects, the decendants of those primarily taught by the 'Sons of God,' justly called "The Builders.'" The author gives a front view of "a systyle hexastyle Doric temple, according to the special instructions imparted to Vitruvius," and deduces from its proportions a few confirmations of "The Secret Doctrine," whatever that may be. For sole comment, we venture, with all respect to Madame Blavatsky, and with special veneration for Marcus Vitruvius Pollio, to quote the favourite monosyllable of Mr. Burchell—"Fudge!"

Mathematics for Architects and Engineers.

It is doubtless very convenient for the architect or engineer to have at hand a complete body of mathematics compiled and arranged from the point of view of his special requirements. With this at command, he is spared the trouble of looking up any particular point in half a dozen of his old school-books, and the vexation of finding (as likely as not) that they all fail him. On the other hand, such books on applied mathematics as we have in this country are seldom sufficiently comprehensive. They are not complete in themselves, but are supplementary to the ordinary text-books, with which it is often difficult to co-ordinate them. In France, Germany, and America, comprehensive manuals of applied mathematics are fairly numerous. One of the most popular treatises of the kind is "Introduction à la Science de l'Ingénieur: Aide-Mémoire des Ingénieurs, des Architectes, etc., Partie Théorique," of which the eighth edition, which has been entirely recast, revised, and corrected by M. Georges Dariès, is now before us. It consists of two stout volumes, the first comprising arithmetic, algebra, geometry, trigonometry, and "topographie," which we call surveying; the second dealing with the calculus (differential and integral), analytical geometry, graphs, mechanics, descriptive geometry, and mechanical draughtsmanship. Originally prepared by the late M. J. Claudel, the work has been thoroughly brought up to date by M. Georges Dariès, and is particularly valuable for the simplicity and clearness of statement for which the French are renowned, and to which the precision and neatness of their language lends itself with peculiar felicity. If mathematics were dealt with in this country with similar expository plainness, lucidity, and analytical skill, the subject would be robbed of most of its terrors for those who have only too much reason for regarding it with invincible repugnance. Nearly two thousand diagrams, and many valuable tables increase the value of a thoroughly useful work.

"Introduction à la Science de l'Ingénieur. Aide-Mémoire des Ingénieurs, des Architectes, etc. Partie Théorique." Par J. Claudel. Huitième Edition, Entièrement Refondue, Revue et Corrigée par Georges Dariès, Ingénieur de la Ville de Paris, etc. Tome Premier, 954 pages, 6 ins. by 9¼ ins. 785 figures et 2 planches. Tome Second, 1,858 pages, 925 figures. Price 28 francs. Paris: H. Duno et E. Pinat, éditeurs, 47 et 49, Quai des Grands-Augustins.

Reinforced Concrete Railway Structures.

The author has compiled an interesting series of illustrations of reinforced structures forming part of the equipment of a model railway, and comprising warehouses, gantries, foundations, retaining walls, bridges, sleepers, fence posts, water towers, etc. The illustrations are neatly drawn and carefully reproduced, sufficient dimensions being given to determine in most cases the scale of the whole. Explanations of the theoretical principles involved are conveniently inserted to enable the examples shown to be intelligently studied.

The author is not quite happy in some of his comparisons and appears to have made the not unusual mistake of attempting to prove too much on behalf of reinforced concrete by comparing it with uneconomical designs in other materials. For instance, it is obviously unfair to adopt as a criterion such a wasteful example of design as a 10 ft. flat concrete floor between rolled joists at 2-ft. centres.

Some of the theoretical explanations might obviously be improved. The formulæ for double reinforcement are based upon the condition that the compressive steel should be situated at the centre of gravity of the equivalent area of concrete in compression, a condition which seldom obtains in practice, and one which could scarcely be relied upon in the example chosen—that of reinforcement by old double-headed rails (p. 65).

On page 45 the shear on the cross girders of a coal gantry is deduced from the equivalent load per foot run of track. This, however, is only applicable to the main girders; the load on the cross girders would be that on the heaviest axle, possibly twenty tons—a very different figure.

The author speaks of the "Regulations" of the London County Council—"proposed Regulations" would be more correct. The book is printed and produced in the excellent style which we have learned to expect from Messrs. Constable.

"Reinforced Concrete Railway Structures." By J. D. W. Ball, A.M.I.C.E., A.G.C.I. 9 in. by 6 in., 208 pages, 123 illustrations and 1 plate, 8s. net. London: Constable & Co.

Text Books and Manuals.

"Valuations and Compensations," the late Prof. Banister Fletcher (Fou Edition, Revised and Enlarged Banister Flight Fletcher and Herb Phillips Fletcher, FF.R.I.B.A. B. Batsford. 7s, 6d. net), has been brou thoroughly up to date in this edition. convenient system of tabulation has b retained, and among the new matter included chapters on the Finance Act 1909. Chapter XI. embodies a parti larly lucid statement and example of a valuation for compensation may arrived at. An exposition of the struct of the valuation tables is also of gr utility.

For the student who desires to obtain acquaintance with the principles and pr tice of surveying, and has not the leis or inclination for actual field work, better guide could be found than Profes Henry Adams's "Practical Surveying Elementary Geodesy" (Macmillan Co. 4s. 6d.). Virtually every phase the subject is covered in the thirty-th concise chapters of this little book, in gard both to office and outdoor work, course of instruction being especially w planned. To each chapter is appende set of questions bearing upon its conte These are of immense value in enabl the student to test his memory and his ceptive powers as he goes along.

Drainage and sanitation constitute least nine-tenths of the total economy building. That is probably the rea why writers on these subjects gener prefer to confine themselves to spe branches of them rather than attempt comprehensive treatment of a field which the vastness is sufficient to ap Mr. E. H. Blake, greatly daring, ha "Drainage and Sanitation" (B. T. B ford. 10s. net) set out to write a pract treatise that includes every branch of subject, and to do so in a trifle over pages, His book, if it were nothing would still be a triumph of system arrangement. Beginning with the envi ment of the building, he proceeds to sanitary problems of planning and struction, ventilation, lighting, and wa ing; the matter of water supply next expounded, from its source to the ing on of hot and cold services and sanitary fittings connected therewith. latter leads naturally to drainage, drainage as naturally to sewerage in ticular and in general, while a si chapter deals broadly with refuse posal, disinfection, smoke abatem and similar questions. Every illustra has been specially drawn for the book each represents a type of appliance ra than an exact reproduction of any p cular manufacturer's speciality. volume concludes with a notewo chapter on the laws affecting sanitatio

"Cranes and Hoists: Their Cons tion and Calculation," by Herm Wilda (Translated from the German Adapted to British Practice by Ch Salter. Scott, Greenwood, and 3s. 6d. net), is one of the Broadway s of engineering handbooks, and it exp the whole science of lifting tackle in introductory chapter entitled "Elemen Lifting Tackle." Passing from general to the particular, different typ cranes and hoists are dealt with, win travelling crabs, etc. The volum amply provided with working draw and, where necessary, with mathema formulæ.

We commend "Elementary Gra Statics," by Mr. J. T. Wight, A.M.I.

hittaker and Co. 4s. net), to the very ge class of engineering students for om it is written—the class which, with- great mathematical attainments, are ious to study and solve by means of phs the various problems that present mselves. The book, while elementary, vides an adequate working knowledge such problems. Its author is a lecturer machine design at the Heriot-Watt lege, and knows how to make a some- t abstruse subject lucid and even read-

Ve welcome the edition for 1914 of pons' Architects' and Builders' Pocket e Book (E. and F. N. Spons, Ltd. 6d. net), which is a most useful little ual. Considerable additions have n made to the prices in reinforced struction, gas-fitter, plumber, elec- ian, and tiler and all the prices in r trades have been revised. In view this extra matter, it has been found essary to omit the diary in order to the book within pocket-book size.

Cement, Concrete, and Bricks.

his book consists of a series of descrip- treatises upon cements, their composi- , manufacture and testing—concretes, forced concrete and its application, and bricks and brickmaking.

he author's explanation of collating subjects into one volume is "to show intimate relationships which exist een cement and bricks (with concrete relative of both) and at the same time dicate some of the directions in which rther study of these materials will be y to prove of value."

nfortunately the task of discovering interesting relationships and the lts to be expected from their study ap- s to be largely left to the industry of reader. The information is set forth lear and interesting fashion, and the ting, binding, and illustrations are llent.

ment, Concrete and Bricks." By Alfred B. 9 in. by 6 in., 412 pages, 113 illustrations, . net. London: Constable & Co.

ACTORY CONSTRUCTION.

the course of a paper on the above ct, read at the forty-second ordinary ral meeting of the Concrete Insti- by Mr. Percival M. Fraser, I.B.A., M.R.S.I., M.C.I., the author interestingly with the advantages and vantages of reinforced concrete for ries in comparison with the prevail- ethods of construction. After citing erious competitors of reinforced con- which are at present before the build- world, he discussed its economic ad- ges in regard to maintenance.

here is no material that I know of maintenance is not necessary. Good work is perhaps as free from this as naterial provided the bricks are care- selected, well built, and pointed in nt. In such a case brickwork should in without repair indefinitely. This applies to stonework where not ex- to smoke and fumes, but the use of is so restricted in England that it not be further considered.

Vith regard to the use of steel-frame ruction, I strongly believe that, as d out at present, it is liable to serious ciation, and it has the very great dis- tage in that this depreciation cannot arded against or amended. A very number of buildings are erected the steel construction is cased in brickwork with no special cautions taken to protect the steelwork permanently against rusting. The Continental system of building up with steel construction and filling the panels with brickwork, leaving the construction of steelwork exposed and painting same, is, of course, liable to depreciation, which must invariably destroy the structure in the course of time.

"The use of corrugated iron for walls or roofs renders a building practically a temporary structure. In London its use is restricted to roofs, and these are usually *hors de combat* within seven years at the very longest. In country districts, by means of continual painting and repair, they may manage to eke out a miserable existence for twenty to twenty-five years.

"With regard to roof construction, a good timber construction may be considered the most durable if duly protected from humidity, etc., and properly ventilated. If the roof is timber with superior slates, it is a construction difficult to beat; but really durable slates and first-class timber construction are comparatively expensive. One will generally find this form of construction, wherever it occurs in factory buildings, especially where of recent construction, to be of inferior timber work in imported scantlings, and French or cheap English slates, which latter may be considered to have had a long life at forty to fifty years. The timber at the best certainly will not stand adverse conditions for very many years.

"Considering, therefore, the claims of reinforced concrete, without wishing to be unduly enthusiastic, I think it may be reasonably asserted that, after a lengthy trial and the closest scrutiny of our chemists, architects, engineers, and constructors, reinforced concrete is, practically speaking, free from depreciation if constructed according to the latest approved practice."

In regard to fire-resisting properties:

"Nothing is of course fireproof, but we have to seek for the nearest approach to this ideal. Ordinary reinforced concrete construction is as efficient a fire resister as can be found. The metal is naturally guarded against by the concrete covering. There is nothing combustible about the construction; it is not liable to exercise a dangerous thrusting or overturning action, even when heated and suddenly cooled. It is, of course, liable when quenched with a strong shower of cold water to have the covering of slabs and beams either flake off or disintegrate. It is rarely or never found that any of the concrete, beyond the covering to the reinforcement, suffers any irreparable damage. Any such covering can be broken away where loose and the building restored after the conflagration. It can therefore be fairly claimed that for factory construction which requires a high standard of fire resistance reinforced concrete can rival any other comparable method of construction.

"Its advantages in respect of hygiene, the absorption of vibration, and in space-saving are dealt with next. But "perhaps the unique merit of reinforced concrete lies in its extraordinary adaptability. There is no other building material which can be put to such extraordinarily diverse uses without unwarrantable eccentricity or expense. The value of a material which can be used for practically any purpose which may arise in the construction of the wide variety of buildings comprised in industrial works need hardly be dilated upon. The practical economy of such a material is also evident. Provided there are no insurmountable difficulties in getting on to the site steel rods, timber, gravel, and cement, we have at hand constituents which are capable of being moulded into any shape and resisting any strain and fulfil purposes which collectively would require the use of a large number of different materials. In the ingredients of reinforced concrete there is nothing which cannot be readily obtained in the most remote locality of the kingdom. In my own experience, in places ten or more miles from the nearest station, concrete work always competed in point of economy with any other permanent form of construction, and wherever eccentric designs are to be carried out, a plastic material will always hold its own with a material which has to be wrought into shape. Indeed, it is difficult to conceive any form of building construction which it is not possible to carry out with reasonable economy in reinforced concrete."

Among the various applications of reinforced concrete to factory construction are the following:

Engine Foundations.

"Engine foundations are often exceedingly complicated, and for this reason it is impossible to construct them with plain concrete, so that it is common and often necessary to employ steel joists in order to avoid an excessive amount of concrete. It is obviously better to use a regular system of reinforcement wherever feasible. It enables the mass of concrete to be reduced to a minimum, and where, as is most frequently the case, the engine is to be set and a large proportion of concrete deposited after an interval, it is a great advantage to have some means of binding the mass of concrete together.

Boiler Foundations.

"With regard to setting the boilers practically the only efficient manner for the Lancashire type of boiler, which is perhaps most common in this country, and also for the water-tube boilers of ordinary type, is to construct a concrete raft so as to offer a clear working space for the boiler-setters, and for this purpose reinforced concrete construction is the best possible. The effect of heat on concrete is likely to cause failure unless a considerable period has been allowed to lapse after the construction before the heat is applied. In cases where a new boiler is installed and put into use immediately the setting is completed serious damage may be done to the concrete owing to the fact that it has not been allowed to dry off naturally. This damage would, of course, accrue to plain as well as to reinforced concrete, and in the case of the former where the practice is often to make the concrete slabs several feet in thickness the resulting damage (where the subsoil is good) is not appreciable, but in case of reinforced concrete, the slabs being thin, they may be entirely disintegrated.

Boiler Shafts.

"It is only of recent years that chimney shafts have been constructed with true economy and efficiency in reinforced concrete, and I would refer all interested in this subject to a paper delivered before this Institute by Mr. Matthews and published in the "Transactions," Vol. ii., Part I.; also I see that we are to have this session a further paper dealing with steel and reinforced concrete chimneys, and I hope in this paper we shall have some information as to the comparative economy of reinforced concrete even as compared with steel. I have had experience recently of the comparative cost of reinforced concrete chimneys which in one particular instance showed a saving of 35 per cent. over a brick construction and a saving of 4 per cent. over steel-plate construction.

Silos and Bunkers.

"The construction of silos and bunkers, which have hitherto consisted of iron or steel, has been found in the last few years to be considerably cheaper and equally efficient in reinforced concrete, and some most important works have been constructed in this material. The grain silos which have been constructed in various parts of the world afford a few typical examples. It is useless to press the claims of reinforced concrete in this connection, as so much work has been done in this country that it may be said that steel or iron construction is now out of date. Savings of 40 or 50 per cent. are possible on large silos over steel construction, and considerable economy is further effected in maintenance.

Foundations.

"Many serious difficulties connected with foundations on bad subsoils have been economically overcome by a discreet use of reinforced concrete. It is a fact that a large percentage of our factories are situated by rivers, canals, etc., and for this reason the foundations are generally expensive. Several buildings are constructed upon marshy soils, which under ordinary circumstances would entail the use of piles and thus incur a considerable expenditure. This expenditure on foundations frequently results in land otherwise cheap proving in the end to be very expensive, as all such expenditure should properly be added to the cost of building land.

"There is practically no form of foundation which cannot be efficiently constructed in reinforced concrete. A common, efficient, and economical form is the formation of a raft on which concentrated and distributed loads of a building are equally spread so that the unit load is reduced everywhere within the limits of the bearing capacity of the soil. A building which the author illustrated was constructed on marshy land, and the foundations cost less than their equivalent in plain concrete and brick footings with damp course, and obviated risk of failure from unequal settlement.

"Piles and sheet piles in reinforced concrete have been used in thousands, and its use in retaining walls has been able to offer the most extraordinary economies.

Bridges.

"It is frequently found to be a great convenience to connect various departments above ground by means of gangway bridges, and as they are nearly always inaccessible, it is generally better to construct these of material for which maintenance is reduced to a minimum. Bridges are useful to cross public footways, and concrete has an advantage over brickwork or stone construction in obviating an excessive rise, and also in the saving of massive abutments.

Conclusion.

"In conclusion, factory buildings are liable to be grossly overloaded, the costs are always reduced to the utmost farthing, and the buildings are not usually treated with such care as domestic or public buildings, and, as mentioned before, are liable to be severely mutilated and subjected to the deleterious effects of steam, vapours, fumes, acids, oils, and undue vibration, etc., and, consequently, the factor of safety in design should never be reduced below four. It is also advisable to construct certain portions with even an increased factor, as, for instance, flat roofs which will with certainty be used for storage, and walls, beams, slabs, and columns, which are generally subjected to the suspension of shafting, motors, and other live loads without consideration of the purpose for which they have been actually designed.

"I think that in view of the enormous extent to which reinforced concrete has been used for buildings of this class during the past few years that it has been comparatively immune from failure."

TRADE AND CRAFT.

Bath and Hot-water Installations: A Point in Municipal Housing.

Every architect when preparing a municipal housing scheme, or designing houses for it, is faced with the problem of providing a cheap house that shall give a return on capital expenditure. One of the essential features in these houses is an efficient bath and hot-water system, and the usual practice has been to instal an ordinary twelve-gallon rustless pan and to connect this arrangement to a bath in the scullery. To economise space and reduce cost this pan has generally been built into the same flue as the kitchen range. The cost of this system, including the kitchen range, erected and fitted, generally runs to between £8 and £10, and this is the provision commonly made for a hot-water system for a workman's £200 house. Other systems would more often be adopted but for the extra initial cost. But there are other considerations to take into account. Any system which is a daily expense to the householder should be avoided. If when hot water is required there is the necessity of lighting up a fire under a pan, this entails a cost of at least 2d. for coal, apart altogether from labour, wood, etc.; and as this expense must be multiplied by six or seven, according to the number of days on which hot water is required, on capitalising this expenditure, say at 1s. per week, it is at once seen that the returns, as far as cheap rents are concerned, do not give the result desired. A thoroughly efficient system, giving hot water at all times of the day or night, and working exactly in the same manner as an ordinary installation in a £500 or £1,000 house, costs anything from £16 to £20, price being regulated by the quality of the kitchen range, sink, bath, and accordingly as a copper or iron back boiler is required; the latter item depending on the nature of the water in different districts.

The point is, Would it not be far cheaper to face the subject boldly at the outset and instal a complete up-to-date and efficient hot-water apparatus taking the same amount of space of, say, 2 ft. by 2 ft. by 6 ft. high, and add the extra 3d. per week required to meet interest and payment on capital, rather than to instal a "cheaper" system, which, however (assuming the correctness of the above-given calculations), costs the householder four times as much to work?

It is unnecessary to dwell on the advantages accruing to the housewife who has a constant and an unlimited supply of hot water direct from her kitchen range similar in every respect to her more fortunate sisters who can afford to live in a mansion.

At the "Ideal Home" Exhibition at Olympia Mr. Ralph Knott installed the patent "Twin" bath system in the "Daily Mail" £200 Exhibition Cottage. The advantages of this system were at once apparent to a practical man, and Mr. C. H. Mills, of Messrs. Mills, English and Co., Ltd., Swansea, asks us to draw the attention of architects and of all who
are interested in municipal housin
the desirability of looking at this m
from the point of view of the higher
nomy. The practice of providing
and hot-water installations in worl
class dwellings, although it is now n
universal, is of such comparatively r
origin that probably the details have
been as yet very extensively reviewe
the light of experience. The points
raised certainly merit most careful
sideration; this being a matter in
efficiency is, in the long run, remu
tive.

Sankey's "Perfect" Chimney-pot

In the new volume of "Specificat
which has just been published, the
an exceedingly practical article on
"Prevention and Cure of S
Chimneys." This is illustrated with
than a dozen sketches showing the
approved means of avoiding
draught. Among these is a very nea
shown as Fig. 8 in the series as an
lent type of smoke-preventing pot,
not identified by name. It will be
to mention that the pot in questi
known as "Sankey's 'Perfect' Pot,
manufacturers being Messrs. J. H. Sa
and Son, Ltd., whose head office
Essex Wharf, Canning Town, E.,
who, we understand, will be pleased to
to architects a model to scale. From
it will be seen that Messrs. Sankey'
is so comely in shape and agreeab
colour (whether in buff, red, or b
that, besides providing an effe
remedy for downdraught, it is an a
ment rather than a disfigurement o
building on which it is used. It is
kept clean, and there are no wo
parts to get out of order.

The Mazda "Half-Watt" Lam

An important development in inca
cent electric lamp manufacture
announced by the British Tho
Houston Co., Ltd., towards the end o
August. This announcement refer
the "Half-Watt" tungsten lamp,
was then exhibited for the first time i
country at the company's London o
Mazda House, 77, Upper Thames S
E.C.

The outstanding characteristic o
Mazda "Half-Watt" lamp is its extr
high efficiency. Instead of consu
between 1 watt and 1.25 watts per ca
consumes only 0.5 watt per candle—
the name "Half-Watt."

It is interesting to note that the fila
of the Mazda "Half-Watt" lamp is
rated in a bulb filled with an inert gas
as nitrogen instead of in a vacuum,
the case with all other types of inca
cent lamps. The use of a gas-filled
and a special form of drawn-wire tun
filament wound in a close spiral
mounted in short loops, are the con
tional features chiefly responsible f
high efficiency of the new lamp.

With the placing on the market
"Half-Watt" lamp, there is now ava
a range of Mazda lamps in sizes
1 c.p. to 3,000 c.p., suitable for all
mercial voltages and applicable to
conceivable lighting purpose.

In addition to the Mazda "Half-
lamp, the British Thomson-Housto
have developed a range of special f
for use therewith. For outdoor pu
—the lighting of streets, shop-front
open spaces—some very effective we
proof lanterns, fitted with reflector
opalescent globes, have been designe

CONCRETE AND STEEL SECTION.

(MONTHLY.)

ARRYING OUT A REINFORCED CONCRETE CONTRACT.*

At the outset the contractor studies his ans thoroughly to consider how he can the work most expeditiously and eco- mically. The first point he must decide the lay-out of the job, where his plant to be placed, whether his steel is to be sembled on the job or in his yard, hether to use hoists, cranes, or a movable ixer and spout.

The Contractor's Staff.

His next consideration will be the ranging of a staff. This, of course, will pend on the nature and size of the work. the job is of considerable size he will ve a resident manager directly respon- ble to his office for the carrying out of the rk.

Directly in touch with the manager will those in charge of the various depart- ents of the work, carpenter foreman, eelwork foreman, concretor foreman, cavator foreman, timekeeper, and book- eper. In touch with these head-foremen ll be sub-foremen, or gangers, over each uad.

Management of the Job.

Having settled his staff, the question ises how the work is to be carried out— hether every part is to be tackled at once, , if in sections, which section first, with general view to continuous employment a full staff of men throughout. This is ten one of the most difficult points of anagement.

Take the case of a building of two wings d a cross building—a U on plan. A od method to adopt in this case would to make a start on one wing first and en put the joiners on to the other while e steel is being laid and concreted in at e first wing. It would not be difficult, if s method of working the various trades alternate wings could be followed, to rry on the work at full bore throughout. is is, of course, a simple case; others I ve come across are very difficult to plan. If work is carried on in a spasmodic shion, as if, in the instance already ken, both wings were carried on simul- neously with the same trade, a con- ctor will never make a satisfactory job. would continually be taking on com- ete gangs and would thus find it difficult keep together a good set of men. Work uld be slow, and, being carried out by sual labour, could not be of first-class ler.

Having made all preliminary arrange- nts, the contractor must consider the thod of timbering to be employed. He ould send a typical drawing to the job owing generally how the foreman is to n his work. This drawing is usually ficient, and an efficient foreman will apt to all details of the work the method wn.

n fixing on a method, the two main nts for consideration are "ease in strik- and adaptability to alteration." Such hing as a wall form need only be con- ered from the point of view of ease in handling and strength for continual re-use.

With regard to column casings, one must also consider adaptability to alteration. The columns on the second storey of a building being invariably of smaller cross-sectional area than those immediately below them, it follows that if the casings are to be used over again they must be built with a view to saving as much labour as possible in alteration.

Timbering.

Much the same kind of problem arises with regard to beams and in floor slabs. When a floor is concreted the order of striking is—first, columns, then beam sides and floor slabs, the underside of beams being left until long after the rest has been cleared away. This is the order that must be taken into account when one is planning the timbering, unless one is prepared to use the job as a timber store. When a floor is struck for the purpose of using the timber above there are no struts left but those under the beams. It is therefore inadvisable when timbering for the next floor to place struts anywhere but above the beams, the concrete in the floor slab being too green to take much load. Thus it becomes advisable to support all the timbering on struts above the beams, and this is the method of support almost universally employed. As a rule, a cross-head is placed on the top of the strut, and on this the beam-side forms rest. Along the sides of the forms a runner is fastened, and on this runner rest the joists for the floor slabs. It is thus possible to strike everything else without disturbing the struts and timbering of the underside of the beams. Unless great care is taken, considerable damage is done to the timbering—particularly that for the floor slabs—when striking.

A method sometimes employed in America, but which the author never saw here, is to use a double horse for lowering forms. This consists of a light movable framework not unlike an inverted four-legged table. These legs reach close to the ceiling, and between each end pair is stretched a rope into which the timbering is placed. The ropes run through pulleys and are then passed down and the forms are lowered with extreme care.

The author has found it quite a successful method to build up struts composed of No. 2, 6 in. by 2½ in. stuff, with 2½ in. distance pieces every 4 ft. or so apart. When striking a handy scaffold can be formed by placing runners through the struts, supporting adjoining beams, and resting on the distance pieces. On planks placed on these runners, the men striking can work and hand the forms down carefully.

Timbering is a very heavy item in reinforced concrete work, and one which is a considerable drain on a contractor's resources, as it has to be used over and over again until it is scrap before he gets a full return for his expenditure. Some contractors try to save by using material of small scantling, but this is false economy. There is relatively more value to be got out of material of stouter section, particularly with boards. A standard thickness for these should be 1½ in. Anything less is liable to much damage in striking. Beam bottoms, particularly, should be 2 in.

Handling Steelwork.

A contractor has also to consider how to handle steelwork in the most efficient and least costly way. For ease in working, the steel should be laid out in separate stacks of the various scantlings, and, where possible, in separate stacks of the various lengths as well. The workers can then find immediately any bar that is required. This involves considerable labour, but it pays.

Before it is placed on the forms all the steel has to be bent to some shape or form, and this work is most conveniently executed without the use of any power-driven machine. Machines are apt to be slow when dealing with large sections. For bars of 1 in. diameter and down they are handy and make a good job. Above that they are usually worked by means of a ratchet, which is slow work. The author has found the simplest and most effective method of dealing with all sizes except the highest is by employing tubes with strong ferrules at the ends. One merely slips the tubes over the rods so that the end coincides with the position of the bend and pulls the other end round to the required angle. Those tubes are of varying lengths and of strength depending on the diameter of the bar to be bent, but a handy length for bars up to 1¼ in. diameter is 6 ft. They are not expensive and a stock can be kept. Their fault is that they tend to burst at the ends, and it is therefore wise to have long strong ferrules screwed or shrunk on. For bending stirrups a small tube 18 in. long may be used, as already described, or, what is probably the most handy implement, a steel claw. This claw is like a two-pronged fork, the prongs being shaped on side view like a mark of interrogation.

Assembling Parts.

The steel having been bent and the stirrups made, say, for a beam, the various parts have now to be assembled. This is best done on trestles, so that men may work all round it with ease. The beam being built, it is placed in position on the shuttering already prepared for its reception. It is necessary to keep the steel from resting on the boards when concreting, and a convenient method of doing this is by placing little wedge-shaped pieces of concrete on the forms to begin with and then resting the steel on these. These blocks are made of rich concrete in moulds and in lengths corresponding to the widths of the beams in which they are to be placed. In section they are about ¾ in. deep and vary in width from 1½ in. at the top to 1 in. at bottom. Being of concrete, they are not removed, but are concreted in, and, being wedge-shaped in section, there is no fear of their falling out on removal of the centering. When the steel is all placed in position the next process is concreting.

Concreting.

A mechanical mixer of the batch type gives the most satisfactory results. From a contractor's point of view also, it is the most economical and is much more speedy than mixing by hand. From the mixer

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Extracts from a lecture on "Reinforced Concrete heory and Practice," given by Alexander Melville e Northern Polytechnic Institute.

the concrete must be conveyed rapidly to where it is to be deposited, and this may be done with barrows and hoists, cranes and skips, or by lifting buckets direct from the mixer, depositing into a bin at the level required or into the funnel of a spout. The mixer may be stationary or movable. Each method has its merits, depending on the nature of the particular job, the main thing being to deposit rapidly and without dropping from a height.

The concrete must be well tamped in position and carefully worked round the rods so that it will adhere everywhere. Most tampers the author thought much too heavy for general work, tending to tire the men and induce them to scamp the tamping whenever they are not watched. It is quite possible to make as good a job with a light tamper, if it is used well, as with a heavy one. For beams the best type of tamper is a ½-in. rod bent at about 2 in. from the bottom at right angles, and slightly feathered. With this the concrete can be well worked round stirrups and rods. To make a good face on walls of beam sides there is nothing better than a shovel worked up and down against the shuttering. For floor slabs a half-inch plate, 6 ft. by 6 ft., riveted to the end of a handle, answers well. Another good method is to use a wooden roller, which has the advantage that it is not so apt to jar the work by causing vibration in the forms.

When filling columns and walls, it is desirable to hammer the form with wooden mallets. This aids in giving a dense concrete and helps to make a smooth finish. In concreting floor slabs and beams, it is well to start at the farthest point from the hoist, when it is being deposited from barrows, so that no wheeling will be done over green concrete. It is advisable also to have an experienced man stationed underneath to watch for any deflections, so that work can be stopped at once and extra staying or wedging put in before the initial set takes place.

In few jobs is it possible to finish a floor throughout in one day, and the question therefore arises how and where to make a stop. This should be made as near as possible to the centre of the span, and the stop should be made vertical against a board placed on edge for the purpose. Next day this joint must be thoroughly wetted and brushed before fresh concrete is deposited. In some cases the joint must be coated with a rich mortar, or, if necessary, the face should be roughened.

Before any concrete is deposited the forms should be well watered; and, of course, water is necessary also on deposited concrete for about a week after laying. This makes a sounder concrete and prevents cracks due to quick drying.

Where a floor is finished and joiners have erected the cases for the columns above (and more so when columns and walls have been concreted and joiners start to lay the boarding for the floors), shavings and sawdust accumulate on the top of the concrete of columns and walls. No temporary handy covering known to the author will keep the concrete free from this. The best method to get rid of it (and it must be got rid of) before concreting is started, is to form traps in the column cases and the wall shuttering at the level at which the concrete was stopped. The concrete surface is then swilled with water and the shavings float off through the traps or doors. If plenty of water is used a thoroughly clean surface can be obtained.

REINFORCED CONCRETE AT BLOOMSBURY BAPTIST CHURCH.

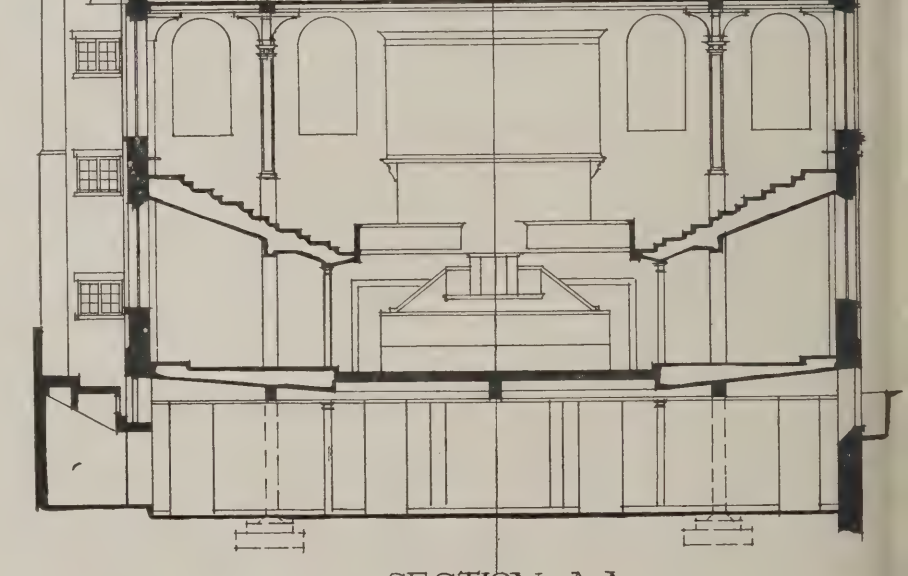
Some time ago the Central Committee of Bloomsbury Baptist Church decided to provide additional accommodation at the church premises to be devoted to the purposes of an institute. This work, carried out in reinforced concrete, has just been completed, and it provides many features of constructional interest. By the courtesy of the architect, Mr. H. Franklyn Murrell, A.R.I.B.A., we are able to publish the following interesting description of the addition, which takes the form of an extra storey. It may be recalled that the old structure, Italian Romanesque in character, was erected in 1848, from the designs of John Gibson, of Westminster.

The original roof was constructed with queen post roof trusses 64 ft. 6 in. span, but in adding a new storey it was obviously necessary to introduce intermediate supports. By means of four 12-in. by 12-in. stanchions placed on the line of the towers the central span is reduced to 42 ft. Star chions have also been carried down again the outer walls on the line of the mai stanchions, so that practically the whol weight of the new storey is carried ind pendently of the old walls.

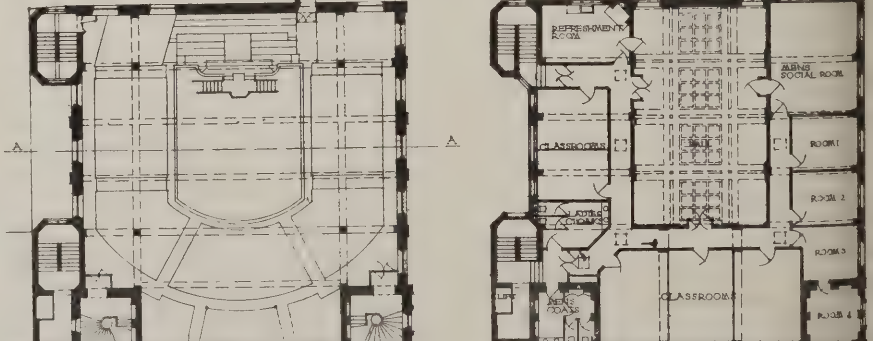
The main cross joists, 42 ft. span, a composed of 24 in. by 7 in. R.S.J.'s plate up to 28 in. with 12-in. plates.

The fixing of the compound joi between the stanchions nearest the towe (taking concentrated loads from reinforce concerte columns above and being 28½ i with 16-in. plates, weighing about seve tons) was a matter of some difficulty.

The two intermediate joists are carrie on plate girders 3 ft. 2 in. deep. By larg four-way bracket caps, with 3 ft. proje tion, the rigid fixing of the main sta chion was assured. R.S.J.'s 18 in. by 7 i brace these stanchions under the galleri and ground-floor levels, grillage found tions 6 ft. 6 in. square spreading the weig on to the ballast bottom. A false ceili of Hy-rib was suspended between the stee work of the new floor. It is supported c



SECTION A·A·

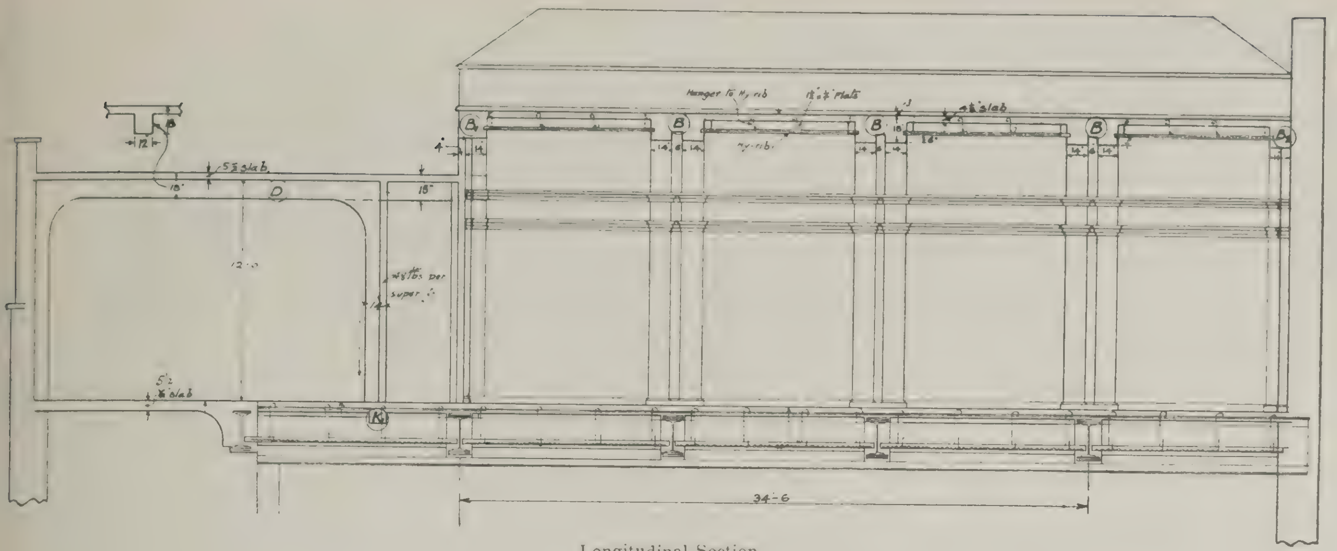


PLAN OF GALLERY

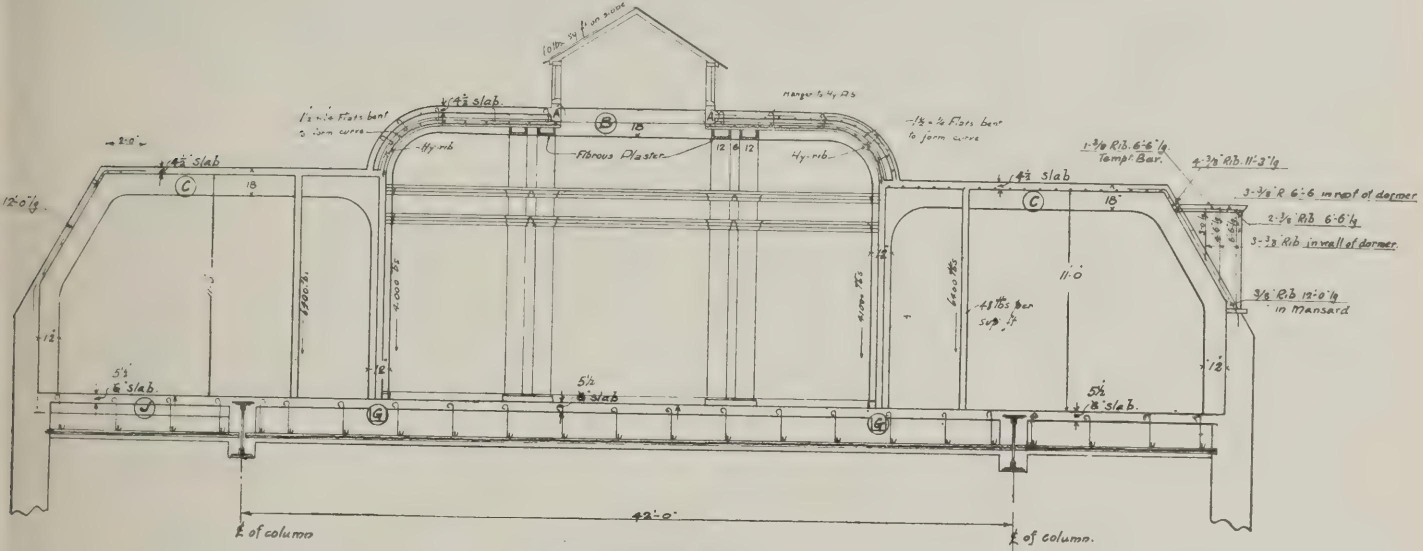
PLAN OF NEW FLOOR

BLOOMSBURY CENTRAL BAPTIST CHURCH: NEW STOREY.

H. FRANKLYN MURRELL, A.R.I.B.A., ARCHITECT.



Longitudinal Section.



Transverse Section.

BLOOMSBURY CENTRAL BAPTIST CHURCH: DETAILS OF REINFORCED CONCRETE CONSTRUCTION OF NEW STOREY.

H. FRANKLYN MURRELL, A.R.I.B.A., ARCHITECT.

ngers of ⅛-in. wire, which are cast in floor and bent down on the removal of concrete centering, the intervening ace being used for ventilation trunks.

The new floor and roof are of reinforced ncrete construction on the Kahn system. les are arranged in the girders for the ertion of ⅝-in. splice bars bolted on the derside of the compression webs, thus choring the reinforced stanchions to the in steelwork below.

The new storey is approached by two irs of fire-resisting construction, one ng reserved entirely as an escape from top floor, the other giving connections he first gallery, vestries, and basement.

The new storey contains a hall to accom-date about 200 persons, classrooms, and atories. The floor itself, which is de-ned for a live load of 1 cwt., is composed a 5½-in. slab in panels of about ft. 6 in. span, reinforced with ½-in. hn rib bars at 8-in. centres, with con-ity bars across the main supports and perature bars placed transversely. der the partitions are secondary con-e beams 14 in. by 9 in., reinforced with ¾-in. rib bars both for tension and negative bending over the girder sup-ts.

The hall, 27 ft. wide, is spanned by con-e beams 18 in. deep and 42 in. wide, igned as twin beams, carrying over the lines of the coupled pilasters below. They are reinforced with four 1⅛-in. rib bars in compression and two 1¼-in. rib bars with one 1¾-in. Kahn bar in tension and with 1-in. by ⅛-in. flat double-vertical binders every 9 in., increasing to every 6 in. at the bends of their quadrant-shaped ends.

The cranked beams of the mansard roof are 18 in. by 12 in., reinforced with two 1½-in. Kahn and two ¾-in. rib bars with 1-in. by ⅛-in. binders. The roof slabs between are 4½ in., those to the front flat, which are of greater span, being 5½ in., reinforced with ⅜-in. and ½-in. rib bars, at varying centres according to span. The beams spanning the hall and the cranked beams of the mansard are both supported on reinforced columns treated as coupled pilasters, which form the chief architectural feature of the hall. These stanchions are reinforced with from four to twelve ⅝-in. rib bars, according to their loads, bound with 3-16-in. wire at 9-in. centres, and rebated to hold the panels between.

Where adjoining other rooms these partitions are double. With a view to improving its acoustic properties the hall has a double ceiling of Hy-rib.

The whole of the reinforced concrete work was carried out to the designs of the Trussed Concrete Steel Co., Ltd., of Caxton House, Westminster, the concrete being in accordance with the usual reinforced concrete specification—1 of cement, 2 of sand, and 4 of small ballast. Considerable alterations have been made in the lower portion of the premises, the heating chamber, which occupied a prominent position on the basement floor, having been sunk to a sub-basement.

The heating and ventilation work has been carried out by Messrs. Rosser and Russell, a powerful new boiler heating all portions of the old and new building having been installed by them.

An extraction fan has been provided in the basement, and in one of the towers has been placed a large fan which can exhaust alternately from the church or from the new storey by means of trunks formed over the corridor.

The electric lighting of the premises has been greatly improved, the buildings having been rewired throughout by Messrs. Duncan Watson and Co.

A push-button passenger lift, running from basement to top floor, has been supplied by Messrs. Aldous and Campbell.

The total cost of the work, including the new organ, will amount to about £10,000. Mr. James Carmichael is the general contractor, and the constructional steelwork was supplied by Messrs. Redpath, Brown, and Co., Ltd.

SOME ADDITIONS TO A BEDFORD FACTORY.

We illustrate herewith details of a reinforced concrete water tower and overhead coal bunkers carried out at Messrs. Peek, Frean's factory, Bedford, and in connection with these we reproduce a photograph, which is interesting from a practical point of view as illustrating the centering which was employed for carrying out the water tower. The water tank and bunkers, again, show the manner in which the various parts are linked together by hooking the reinforcement.

In structures such as these, especially in a case where accommodation for water has to be included, it is absolutely essential that nothing should be left to chance. At the same time, it will be seen that the reinforcement provided would not comply with the proposed regulations of the London County Council, which require that every rod shall be hooked or fish-tailed; and this should afford food for thought as to the practical value of some of the elaborate requirements provided for indiscriminately in these regulations.

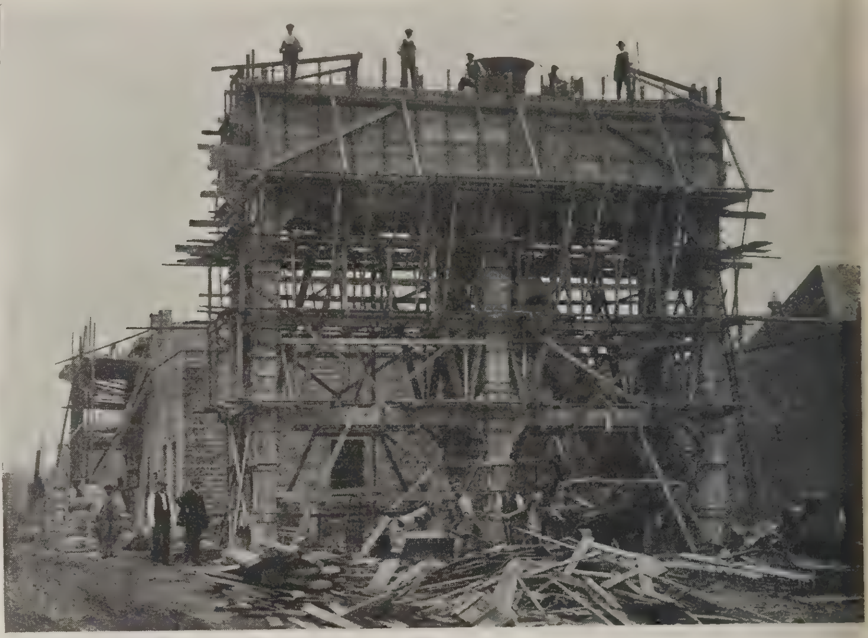
In the present instance the beams are secured from side to side by tie rods to withstand the lateral pressure, and the braces are hooked to the vertical supports to enable them to take tension against wind pressure.

In no instance, however, will it be found that the slab rods are hooked or fish-tailed at the ends. The system of construction adopted here is nevertheless identical with that of a large number of similar structures successfully erected in various parts of the country.

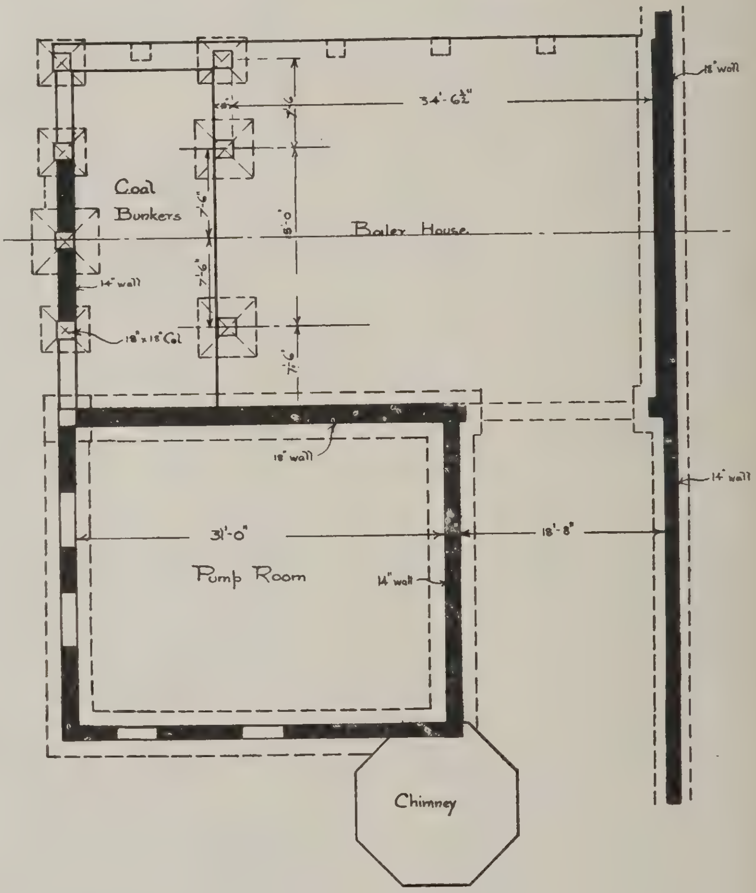
The key plan shows the relative position of the coal bunkers which feed the boilers to that of the pump room and the water tanks.

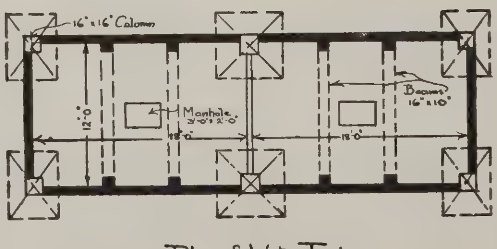
It should be noted that the work connected with the boiler house is an addition to the factory which was described in this journal on November 5th, when we pointed out that the saving effected by the use of reinforced concrete as against tenders received for ordinary methods of construction amounted to over £6,000.

The present additions have been carried out on the same schedule prices, and the contractors, as before, were Messrs. William Moss and Sons, Ltd., of 48, Bedford Row, the whole of the reinforced concrete being designed by their staff under the direction of their engineer, Mr. H. de Colleville, A.R.I.B.A.



Water Tower in Course of Construction





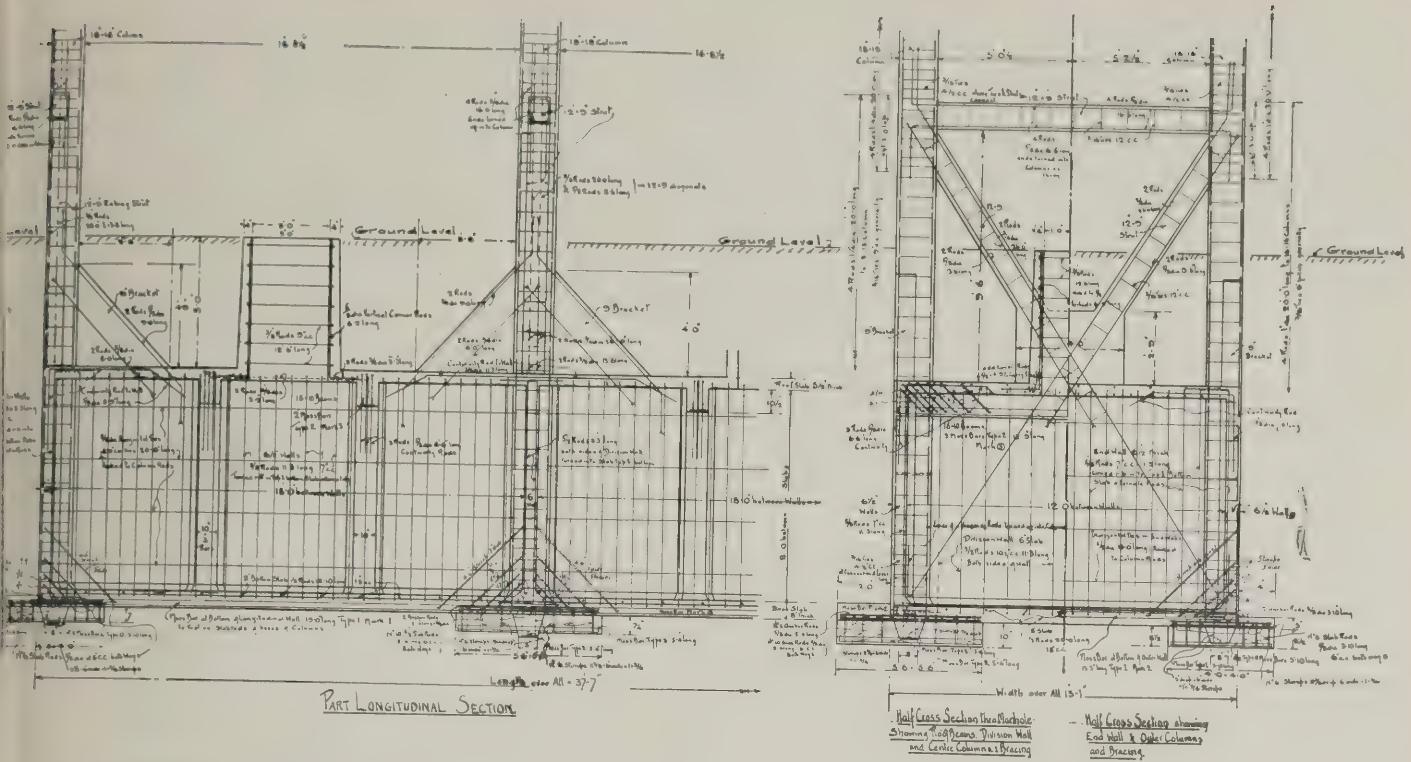
Plan of Water Tanks

REINFORCED CONCRETE WATER TOWER, ETC., BEDFORD.

THE FUTURE OF STEEL CONSTRUCTION.

The scientific use of iron or steel for construction purposes is so comparatively modern that no great retrospect is possible. The first wrought-iron bridges were built in England by George Stephenson in 1824. Steel building construction, in the modern sense, was first developed in the late '80's, though, of course, iron floor-joists supported on masonry and cast-iron interior columns had been used or a long time prior to that date.

Building construction has probably made the greatest advance in America, where in twenty-five years a jump has been made from eleven and fourteen-story buildings to the fifty-seven-story 750-ft. Woolworth building; and in large centres of population, where the cost of land is high, the "steel-frame" building has


Ground Level
Ground Level
Ground Level
Part Longitudinal Section
Length over All = 37-7
Width over All 13-1
Half Cross Section thro Manhole Showing Roof Beams, Division Wall and Centre Columns & Bracing
Half Cross Section showing End Wall & Outer Columns and Bracing

REINFORCED CONCRETE WATER TOWER, BEDFORD: DETAILS OF UNDERGROUND REINFORCEMENT.

ly displaced the old type of masonry
uction.

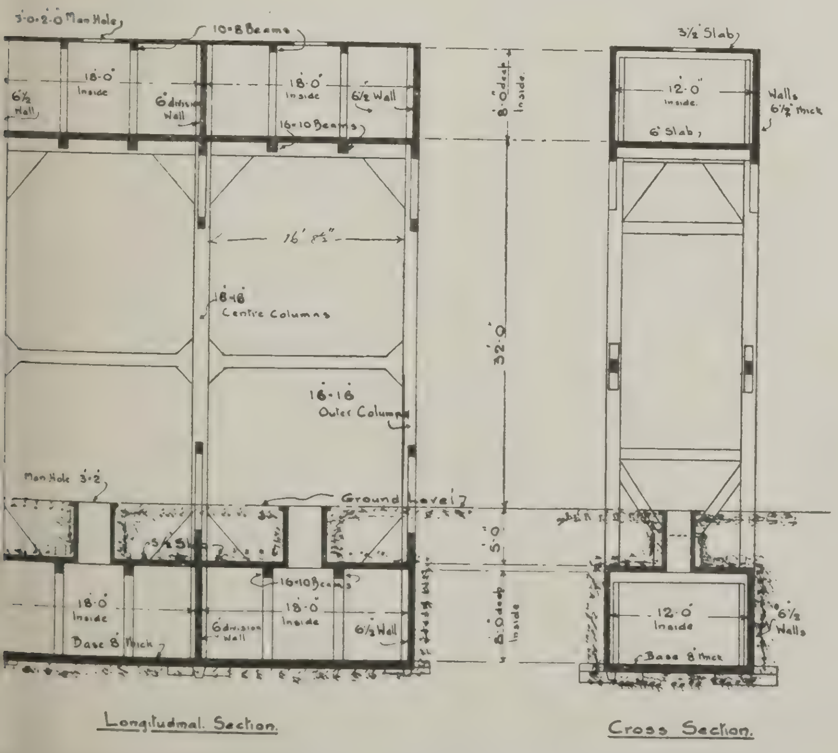
e advance in design and size of con-
ion has also called for great improve-
in the quality of materials. Engi-
quickly went from iron to steel, and
hey are fast going from steel to its
—nickel, vanadium, and other
s, which have been found to increase
ength in greater proportion than its

Eiffel Tower, 1,000 ft. high, is con-
g proof that buildings of a hundred
are perfectly feasible. In America
is certainly no engineering obstacle
construction of buildings of more than the present maximum height. The greatest drawback to the construction of buildings of such heights is the insufficiency of the streets of a city, as now laid out, to accommodate the population that such buildings would provide, and this capacity of the streets will set the final limit on the heights of adjacent buildings.

In bridge construction there is also a field for advancement, even beyond the great spans now in existence. With the new materials now coming into commercial use the strength of members can be greatly increased without a corresponding increase in weight. The fixed weight of long spans is the greatest obstacle to increase in length. Furthermore, with very long spans the matter of impact becomes practically of no effect, owing to the fact that a relatively small portion of the entire load is a moving load so that higher unit strains can be used, and types that are subject to considerable vibration and deflection in short spans can be used with safety and efficiency in very long spans. For example, the suspension type of structure will allow the erection of spans largely exceeding those now existing, and this type will not require any great increase in the present size of individual members.

What is most needed for the development of structural undertakings of great magnitude is a material which will have a greater strength without the sacrifice of its ductility or increasing its cost to the extent of its increase in strength.

The engineers in this field of investigation are giving constant thought to this object, and the successful results they have already obtained with various alloys and special treatments encourage the belief that they will develop still more efficient materials.



EINFORCED CONCRETE WATER TOWER, BEDFORD: GENERAL SECTIONS.

TESTS OF REINFORCED CONCRETE.

A short time ago we described and illustrated a simple and ingenious testing machine designed and constructed by the staff of the Westminster Technical Institute. This, we note, is now being supplemented by a new testing machine, with which it is proposed to carry out an extensive series of experimental tests with regard to deflection, the modular ratio, the action of shear members, and the general behaviour under load and the ultimate strength of beams, columns, slabs, etc. It is hoped that these tests may supply some data which are at present lacking. A course of instruction which combines the experimental proof of theory with the working out of practical calculations should be of signal service in the elucidation of fundamental principles of reinforced-concrete construction.

THE PROJECTED AUSTRALIAN CAPITAL DESCRIBED.

Mr. Griffith Taylor, Acting Geologist to the Commonwealth of Australia, read a paper before the Royal Geographical Society in the Lecture Theatre, Burlington Gardens, recently, on the projected capital of the Australian Commonwealth.

Mr. Taylor explained that the site of Canberra, the Federal capital of Australia, was about 150 miles from Sydney and 250 from Melbourne if a straight line were followed in each case. A Federal railway eighty miles long would, in a few years, link the Canberra Railway (which still needed completion) to the Federal port at Jervis Bay. The Federal Territory, in which the capital would stand, lay in the south-east part of New South Wales, and comprised about 900 square miles, or something like the area of the Grand Duchy of Luxembourg. Of its 568,227 acres only 3,193 were at present under cultivation, but the territory occupied the natural gateway to the best-watered temperate region in Australia, and no doubt its population would grow rapidly. The new capital would be built on the banks of the Molonglo River, which, although useful for watering stock and, when filtered, for human drinking, was not large enough to supply a city. Indeed, in midsummer it almost ceased to flow. A dam was to be built across it, so as to form a lake four miles long and about 12 ft. deep, greatly enhancing the beauty of the scene.

The water for the capital was, however, to be obtained from the Cotter River, a tributary of the Murrumbidgee. On this stream a weir was being constructed at an elevation of 1,560 ft. about twelve miles from the city site, but as the latter was 1,900 ft. above sea level a lift of 900 ft. would be needed to raise the water of the Cotter to the top of Mount Stromlo, where the distributing reservoir was to be situated. The city would be built on a plain nine miles square, bounded by the abrupt, somewhat conical ends of three low ranges—Black Mountain, Mount Ainslie, and Mount Mugga. Its dominating feature would be the Commonwealth Houses of Parliament, which would stand on the foothills of Mount Mugga, in the south. The administrative buildings were to be placed between this spot and the River Molonglo, while the railway stations would be east of the city. In the east also would ultimately rise the manufacturing centres, for here, as in most towns, the west, with its fresh winds, was expected to be the best residential quarter. It had been wisely decided to abandon the right-angled system of streets, beloved in America and unfortunately used in Melbourne and Adelaide. The cobweb had been taken as the pattern of the new capital, the plan of which would be dominated by three radiating and concentric units. When it was realised that about 90 per cent. of a town's travelling population needed to visit the centre every day, it was clear that there was enormous waste of energy in a place devoid of radiating streets. In the middle of the coming capital would be Lake Molonglo, which would be kept pure in dry summers by a regulating weir higher up its main tributary, the Queanbeyan River. Beautiful panoramas of the city and its surroundings would be obtainable from the hills rising sharply above the plain on three sides of the site. One might imagine this city of noble granite buildings, standing amid boulevards, where the sombre beauty of native trees would be relieved by contrast with English elms, oaks, and poplars. In the centre the lake would be fringed by magnificent willows, as the river was today, with Tidbinbilla, 5,000 ft. high, twenty miles to the west, and Long Bimberi, over 6,000 ft. in height, to the south. In reply to questions by the Chairman, the lecturer confessed that he did not know when the new capital would take substantial shape, or what it would cost, but preparations for laying it out had begun.

JOHNSON'S LATTICE AND "KEEDON" SYSTEM.

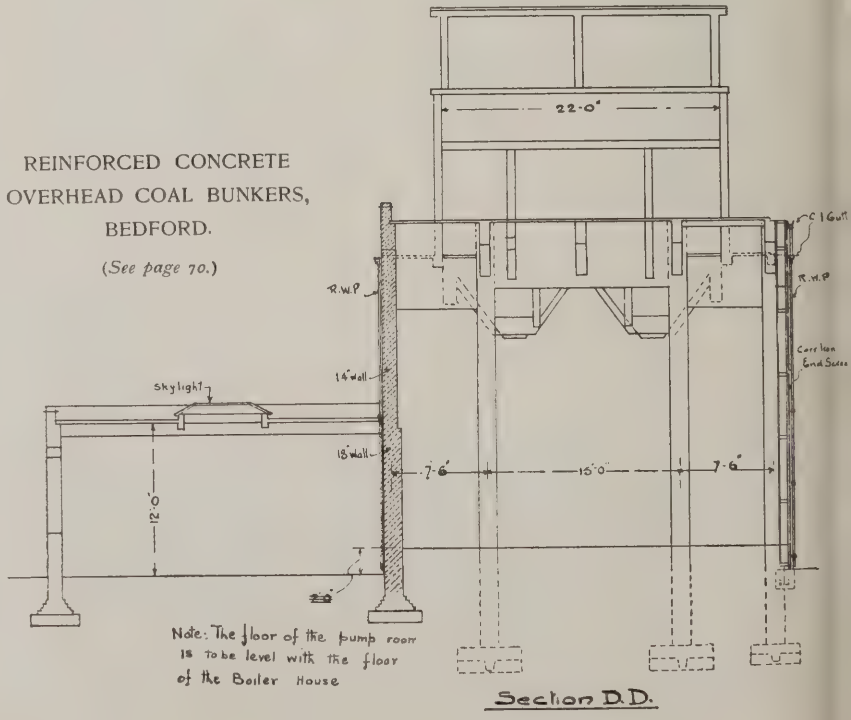
An illustrated booklet giving particulars of Johnson's Lattice and "Keedon" system of reinforced concrete lays stress on the necessity for rigid shear members or stirrups to resist diagonal tension and shear stress. It is shown that in the "Keedon" system rigid connection between the shear member and the reinforcing bar is obtained on the wedge principle, the stirrup being looped round the bar and fixed in position with a wedge. It is clear that this method admits of rapid variation and adjustment of the spacing of the shear members, and thus combines the advantages of a non-slipping bar with those of having the shear members adjustable without possibility of displacement during filling and ramming. "Keedon" reinforcement may be obtained with or without the main bars, and for countries where plain bars are obtainable the stirrup and hoop reinforcement is all that need be shipped. Johnson's steel wire lattice, which was first used in 1903 for reinforcing the floors of the Savoy Hotel, London, is made for the home trade in twelve standard sizes, of which the approximate weights range from 3.4 lbs. per sq. yd. to 13.45 lbs.; the former having a mesh (centre to centre of wire) of 2 in. by 4 in.; the latter, of $1\frac{1}{2}$ in. by 4 in.; the weights of intermediate sizes showing a convenient graduation. For export nine standard sizes are tabulated. In each case—home and export—the standard sizes can be modified to meet special conditions. It is stated that the steel used in the manufacture of the lattice is wire-drawn, and possesses a tensile strength up to 40 tons per square inch. The lattice is manufactured in lengths up to 200 ft., anc
any width up to 7 ft.; wastage from o
lapping being thereby eliminated.
booklet under notice contains nearly
hundred pages of "Technical Informa
and Formulæ, with Tables of Safe Ca
ing Loads." These tables and form
are based on the R.I.B.A. report and
practical experience, but apply only to
Lattice and "Keedon" system. They
late to solid and hollow floors, tee
rectangular beams, columns and colu
bases, and piles. The tables are set
with great clearness, large and legible
showing at a glance all the essential
for various conditions. These tables
enable architects and engineers to de
mine offhand the chief outlines of a sche
and the firm are prepared to supply
tailed drawings for its completion.
teresting photographic views of vari
works which have been carried out on
system are appended, and the results o
dependent tests by the Manchester Sc
of Technology are reported. The boo
may be obtained from Messrs. Rich
Johnson, Clapham, and Morris, I
Reinforcement Department, 24 and
Lever Street, Manchester.

SOCIETIES AND INSTITUTION

GLASGOW ARCHITECTURAL CRAF MEN'S SOCIETY.

Lecture on Glasgow Cathedral.

At a meeting of the Royal Techn
College Architectural Craftsmen's Soc
Glasgow, held on January 16th, Mr. T
Gilmour, A.R.I.B.A., in the chair,
George Laird delivered a lecture ent
"Glasgow Cathedral." He dealt first
the history of the cathedral and then
scribed the work of taking off the old
putting on the new roof. The cou
were made of oak, and the first task t
faced was the procuring of British oak
the new roof. Almost all the timber c
from England. In the carpenter
and in the decorated bosses some of
oak which had been in the roof sinc
was erected in the thirteenth century
been reused. Mr. Laird said this is



REINFORCED CONCRETE OVERHEAD COAL BUNKERS, BEDFORD.

(*See page 70.*)

teresting, since it points to a durability timber which many will hardly believe d if it had not been for the troublous nes of the sixteenth century, when the eformation took place, and if the roof d been kept intact and watertight there good ground for believing that the old of might be standing to-day. The lecre was illustrated with lantern slides owing the various stages of the work, d there was on view a number of speciens of the old timber, of old hand-made ils, and also of wood pegs used instead nails for fixing the sarking on the roof.

LONDON MASTER BUILDERS' ASSOCIATION.

Monthly Report.

The ordinary meeting of the Council was ld on Thursday, the 15th inst., at the ices of the Association, Koh-i-Noor use, Kingsway, W.C., the President r. Walter Lawrence, jun.) in the chair, d there was a large attendance of mbers.

The report of the Special Council and mmittee meetings, whereat particular ention was devoted to the procedure to adopted in carrying out the policy thorised at the general meeting on the h ult., and instructions for the issue of posters and circulars to all members in ler that the information therein conned might be conveyed to all workmen their employ a week before the plan pted would come into operation, were d and adopted.

New members were elected and further plications for membership received.

n reference to the preceding paragraph, ention may be called to an allusion in preface to the L.M.B.A. Handbook for present year, which says: "Very ious issues are in the balance, and by hholding moral and valuable support ing a crisis that may prove to be withparallel in the history of the industry, -contributory employers are incurring rave moral responsibility, since obvily they are imperilling not only their prospects but the well-being of emyers generally."

orrespondence and trade matters of inst were considered and instructions ed.

he annual dinner of the Association take place on the 18th prox.

THE LONDON LOCKOUT.

consequence of the refusal of the nists to sign individually last Satur- an agreement to work peaceably with -unionists and to submit to a penalty os. for breach of that agreement, most ne big building contracts were brought standstill. The unions concerned the Carpenters, United Builders' ourers, Plasterers, Stonemasons, and klayers. An attempt is being made by men to claim insurance unemployment fit on the ground of "dismissal." It aid that about 30,000 men were ind in the first instance.

Removal.

essrs. Robey E. Carpenter and Son, tity and measuring surveyors, ester, have removed to larger and central premises at 12, Gotha Street, ester. Telegrams: Carpenter, Gotha t, Leicester.

R.I.B.A. PRIZES AND STUDENTSHIPS.

At the meeting of the Royal Institute of British Architects held on Monday evening last the awards of prizes and studentships for 1913-14 were announced as follows:

Institute Silver Medal and Twenty-five Guineas.

(ESSAYS):

T. S. Attlee, M.A., London, W.C. Motto: "Per Ardua ad Astra." "The Influence on Architecture of the Condition of the Worker." *Certificate of Hon. Mention and Five Guineas:* J. M. W. Halley, London, W.C. Motto: "Resurgam." "The Rebuilding and the Workmen of St. Paul's Cathedral, from the 'Accounts.'" *Certificates of Hon. Mention:* M. S. Briggs, London, W.; Alex. R. C. Eaton, Forest Gate.

Institute Silver Medal and Ten Guineas.

(DRAWINGS):

Subject.—Measured Drawings of Ancient Buildings in the United Kingdom and Abroad:

James Bennett, Glasgow. Motto: "Rags."

Soane Medallion and £100.

Subject.—Design for an Official Country Residence for a Royal Personage in the United Kingdom:

Cyril A. Farey, London, W. Motto: "Thistle." *Certificate of Hon. Mention and Ten Guineas:* H. C. Bradshaw, Liverpool. Motto: "Farnesina." *Certificates of Hon. Mention:* Gordon S. Keesing, Paris. Motto: "Akarana"; Thomas Chalkley, Bermondsey, S.E. Motto: "Blue Anchor."

Pugin Studentship: Silver Medal and £40.

(DRAWINGS):

W. Cecil Young, Stockport. *Certificate of Hon. Mention:* J. R. Leathart, Brixton.

Tite Prize: Certificate and £30.

Subject.—Imaginative Composition in Perspective in the Italian Style for an Important Fountain:

Trenwith Wills, Westminster. Motto: "Golden Dolphin." *Certificate of Hon. Mention and Ten Guineas:* Arthur G. Shoosmith, London, W. Motto: "Panama."

Arthur Cates Prize: Forty Guineas.

J. C. Rogers.

Grissell Gold Medal and Ten Guineas.

Subject.—Design for a Four-storey Dockside Warehouse:

Philip D. Bennett, Birmingham. Motto: "Syrod."

Godwin Bursary: Silver Medal and £65.

M. S. Briggs, London, W.

Ashpitel Prize.

William Wallace Friskin.

SPECIAL LEGAL REPORT.

Builder's Successful Appeal Under the Workmen's Compensation Act: Important Judgment.

S. Clapp v. Carter.

January 4. Court of Appeal. Before the Master of the Rolls, Sir S. Evans, and Mr. Justice Eve.

This was an appeal by the respondent, an Exmouth builder, from an award given against him in favour of the applicant, by the judge sitting at the Exeter County Court as an arbitrator under the provisions of the Workmen's Compensation Act.

Mr. Shakespeare appeared for the appellant and Mr. Basil Watson for the workman.

Mr. Shakespeare said the appeal was by Mr. Carter, a builder, from an award in favour of the workman, and it raised a question under Section 2 of the Act. The judge had found that the want of notice, or failure to give it, was owing to "mistake or other reasonable cause." The sole question here was whether the judge had misdirected himself. Counsel contended that the judge had misdirected himself, because there was no evidence on which he could find any facts which amounted to a "mistake or other reasonable cause." Apparently the County Court judge had thought that, because the workman hoped, and had reasonable ground for hoping, that the illness from which he was suffering as the result of the accident would pass away, that constituted "mistake or other reasonable cause" for not giving notice. The accident happened on March 27th, 1912, when the applicant was engaged in a loft for appellant. He stood upon a plank which gave way, causing him to fall into a stable below, the applicant knocking his head very badly, and he was semi-conscious for some time. He went home and was away from work until March 30th, when he returned to work and continued at his employment until October 4th. The appellant knew of the accident, and the County Court judge had found that verbal notice had been given of it. On October 4th the applicant became very ill, and from that date till the end of December he was in such a state of health that counsel thought the judge was justified in finding that during that period the applicant was not in a condition to give notice of the accident. In December of that year a verbal claim was made by the wife on the appellant. The next thing that happened was that on March 27th, 1913, a year after the accident, a written notice was given and a claim was made. Those were the important dates. Counsel's contention was that there was no "reasonable cause for the applicant having abstained from giving written notice of the accident within the time prescribed by the Act."

Mr. Basil Watson, in supporting the award of the County Court judge, said the point taken against him was that no claim against the appellant had been made in writing by the applicant within the prescribed time. But the fact was that on the day the accident happened verbal notice of it was given to the appellant and a note was made in the appellant's book of the accident, and that was in fact referred to by the applicant's wife when she made a claim on December 10th. Therefore, he argued, there was not only verbal notice, but particulars were taken down in the appellant's own book of the accident.

The appeal was allowed by the Court.

The Master of the Rolls said there was no finding by the County Court judge that the employer had not been prejudiced by the want of written notice within the prescribed time. He could scarcely conceive that there could be a finding which could be upheld that the employer had not been prejudiced by the want of notice. Upon the evidence he failed to see that the failure to give notice within the prescribed time, viz., within six months from the occurrence of the accident causing the injury, was due to "mistake or other reasonable cause." For these reasons he did not think the award of the County Court judge could be sustained.

Sir S. Evans and Mr. Justice Eve concurred.

COMPETITIONS.

Manchester Royal Exchange Extension.

The awards in the above competition have been made by the assessor (Mr. J. S. Gibson, F.R.I.B.A.), as follows: 1st, Messrs. Bradshaw, Gass, and Hope, of Bolton; 2nd, Mr. T. Edwin Cooper, of London; 3rd, Messrs. Thomas Halliday and Claude Paterson, of Manchester. Premiums of 100 guineas will be awarded to the authors of the designs placed second and third. The scheme is estimated to cost £600,000.

Board of Trade Offices, London.

One hundred and eighty-seven designs have been submitted in the competition for the new Board of Trade offices, to be erected on a site between the Embankment and Whitehall. The authors of ten selected designs will be invited to take part in a final competition, and will receive an honorarium of £300 each.

Paris Cheap Dwellings.

In the series of cheap dwellings competitions instituted by the City of Paris, the jury have issued the following awards relating to sites in the Rue Marcadet: 1 (8,000 francs), MM. Hébrard, Trévelas Dumail, architectes diplômés par le Gouvernement; 2 (5,000 francs), M. Payret-Dortail, A.D.G.; 3 (4,000 francs), MM. Avfridson and Bassempierre-Sewrin; 4 (3,000 francs), MM. Koemptgen père et fils. The competitions relating to sites in the Rues de la Solidarité, David-d'Angers, de la Concorde, d'Alsace-Lorraine, de la Fontaine-à-Mulard, Brillat-Savarin, and Passage Vignon, have yet to be judged.

Church, Birmingham.

The Council of St. Augustine's Church, Birmingham, have selected the design of Mr. Edwin F. Reynolds for the new church of St. Germain.

Schools, Hendon.

The following architects have been invited to send in designs: Mr. John Hudson, Mr. Martin S. Briggs, Mr. G. Hornblower, Messrs. Spalding and Myers, Mr. H. A. Welch, Mr. W. G. Wilson. The committee do not bind themselves to carry out any of the designs submitted, but if a design be approved the successful architect will be employed subject to agreement to carry out the works at a commission of 3½ per cent. The committee offer the following premiums: for the plans and estimates deemed to be second in order of merit, £30; for the plans and estimates deemed to be third in order of merit, £15.

Council School, Ince-in-Makerfield.

The Ince-in-Makerfield Education Committee require the services of an architect (practising within the area of the Wigan Union) to plan and supervise the erection of a two-department elementary school at Higher Ince, to accommodate 750 children. Applications, stating terms and past experience, should be sent by February 2nd to Mr. W. Smith, Secretary of Education, Council Offices, Ince, near Wigan.

An Essay Competition.

The Council of the Society of Engineers propose to award in 1914 a premium of books or instruments to the value of £10 10s. for an approved essay on "The Status of the Engineering Profession." The competition is open to all, but before entering application should be made to the Secretary, 17, Victoria Street, Westminster. The sending-in date is May 30th, 1914.

PROJECTED NEW WORKS.

Rosyth Housing Scheme.

In connection with the above it is understood that sixty blocks of eight dwelling-houses each are to be proceeded with.

Leshmahagow Council Chamber.

A committee has been appointed by the Leshmahagow Parish Council to draw up a scheme for altering the Council Chamber.

New Music-Hall, Birmingham.

In view of the imminent expiry of the lease of the Hippodrome in Hurst Street, it has been decided to erect a new building on the site of Curzon Hall.

Reservoir, Beestaigs.

The Linlithgow District Committee of the County Council have approved the recommendation to raise a loan of £30,000 to build a new reservoir at Beestaigs.

Enlargement of Church, Broadstairs.

It is proposed to enlarge the old church at Broadstairs at a cost of £3,500, of which sum £2,400 is now in hand. The work will be carried out in stages. The architects are Messrs. Moore-Smith and Michael Durrant.

Picture Theatre, Spalding.

Mr. Bancroft, of Wisbech, proprietor of the Spalding Hippodrome, proposes to erect a new picture theatre in St. Thomas' Road, Spalding. Plans have been submitted to the Sanitary Committee of the Spalding Urban Council and will be considered next Friday.

Municipal Housing Scheme, Foleshill.

The Foleshill District Council are about to consider a municipal housing scheme for a portion of the district, and have intimated their willingness to consider offers of building sites, from one to four acres in extent, in the parishes of Bedworth, Foleshill, and Keresley.

Asylum, Thornhill.

At a meeting of the Derbyshire County Council reference was made to the proposed new asylum for the county at Thornhill, and it was decided to instruct the architect, Mr. Pick, to get out plans following the lines of the asylum at Bangour Village, near Edinburgh, which is on the "Villa" system.

Buildings and Additions, Hampton.

The following plans have been submitted to the Hampton District Council for approval: Rebuilding the World's End Inn, Station Road, submitted by Messrs. Gibbs, Sturdy and Usher, on behalf of Messrs. Hodgson's Kingston Brewery Co., Ltd., and additions at The Karsina, Tagg's Island, submitted by Messrs. F. Matcham and Co., on behalf of Mr. Fred Karno.

Buildings, Aberdeen.

The Plans Committee of the Aberdeen Town Council has approved the plans for the following new buildings in that city: Five dwelling-houses on the west side of Clifton Road, at its junction with Hilton Road, for Mr. James A. Hadden, solicitor; addition to fish-curing premises at Raith Road, for Messrs. Allan and Day fish-curers, per Messrs. Brown and Watt, architects; shops on the north side of Rosemount Plate, for the Northern Co-operative Co., Ltd., per Mr. George B. Mitchell, architect.

Reconstruction of the Athenæum, Manchester.

The detailed plans prepared by Messr
Charles Clegg and Son for the reconstru
tion of the Athenæum have been complete
and are now in the hands of the quanti
surveyors.

Naval College, Osborne.

It is proposed to rebuild the great
portion of the Royal Naval Colleg
Osborne. At present the college consi
of about thirty buildings of the bungal
type, and the scheme is to erect bri
buildings in the place of these.

Garden City, Llanelly.

A scheme for the laying-out of a p
tion of the Stepney Estate in Llanelly f
dwellings on garden city lines has be
submitted to the Roads Committee of t
Town Council, and the plans have be
recommended for approval. Eighty ac
are to be laid out and sites provided f
664 houses, equal to about 9 houses p
acre with four and a half acres for op
spaces. The main roads will be so c
structed as to leave a width of 80 ft. b
tween the building lines.

Houses, etc., Mansfield.

The Highways Committee of the Ma
field Town Council recommend that
following plans be approved: Mansfi
Laundry Company, three lock-up sh
and showrooms, Belvedere Street;
Pickard and Sons, house and shop, Bel
dere Street; Mrs. A. M. Parson, hou
George Street; Mr. W. Packs, two hou
Oak Avenue; Mr. J. W. Baxter,
houses, Southwell Road; Mr. W. Hum
alterations and additions to Oriental C
Westgate.

Town Hall Extension, Richmond.

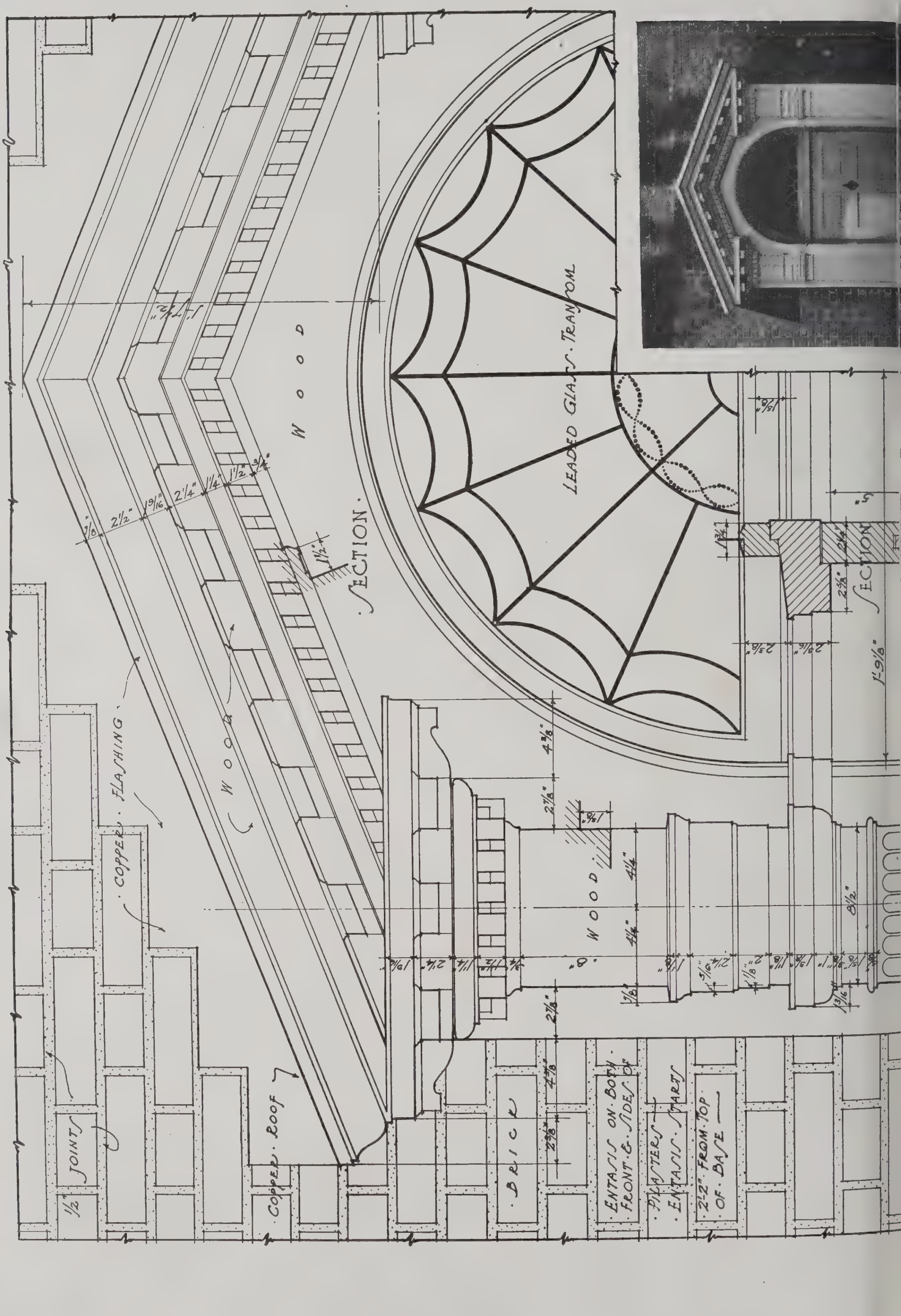
At the last meeting of the Richm
Town Council the General Purposes C
mittee was authorised by the Counci
prepare plans, estimates, etc., for ext
ing the town hall, by the inclusion of
whole site of the premises now occu
by Messrs. Mawers, Ltd., and als
arrange, if need be, temporary accom
dation for the Medical Officer of He
and Sanitary Department elsewhere, p
ing the completion of the extension.

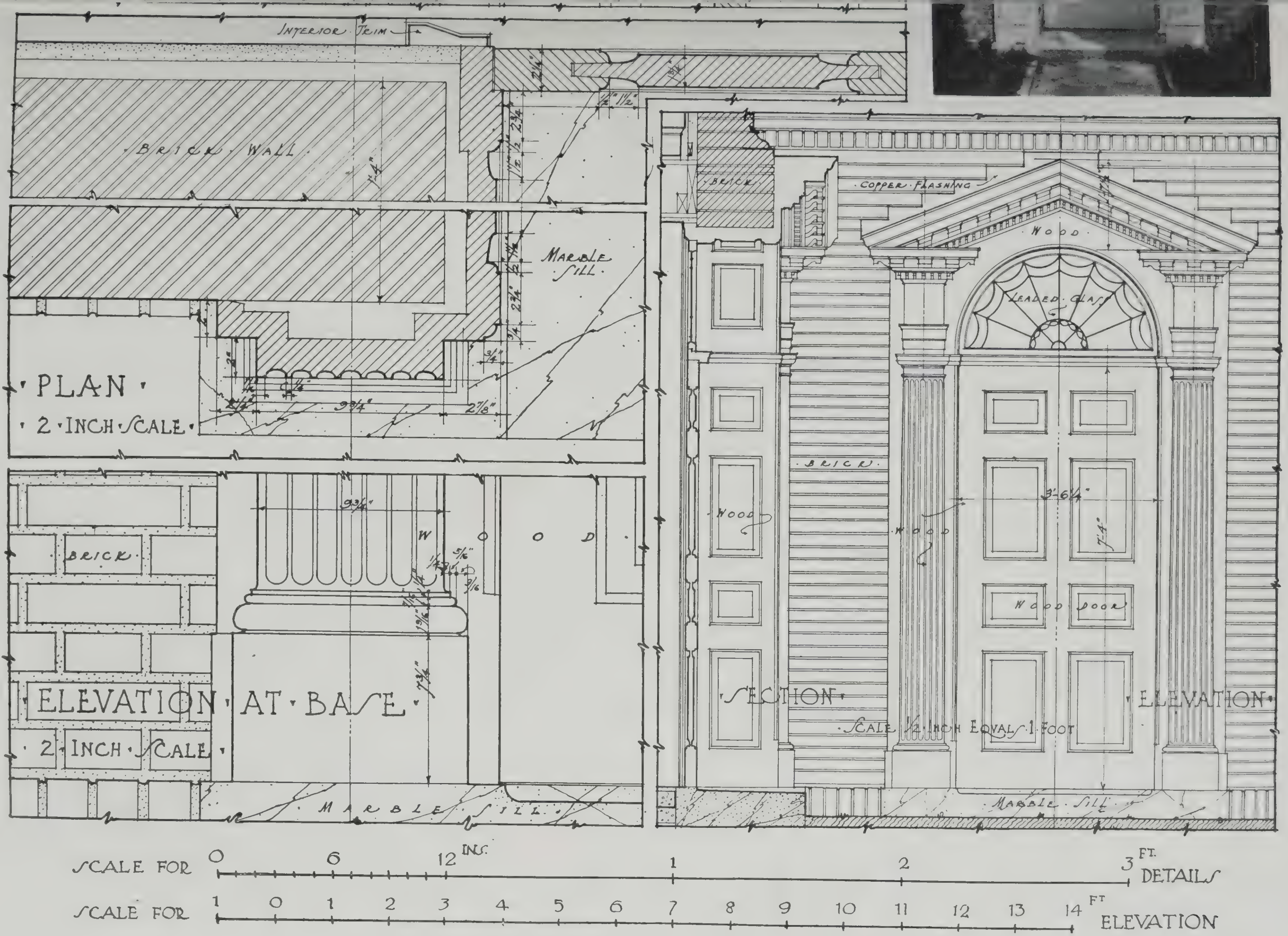
Masonic Hall, Nottingham.

At a special meeting held last wee
the Masonic Hall in Goldsmith Stree
the Committee of General Purpose
Provincial Grand Lodge, the Selection
Committee appointed to consider the
petition plans sent in by invited archit
presented their report. The sel
designs are those of Messrs. John H
and Son; premiums have also
awarded to Messrs. Brewill and B
Mr. W. Dymock Pratt, and M
Sutton and Gregory in the order na
It is estimated that the new hall will
£20,000 to £25,000.

Road and Buildings, Harrogate

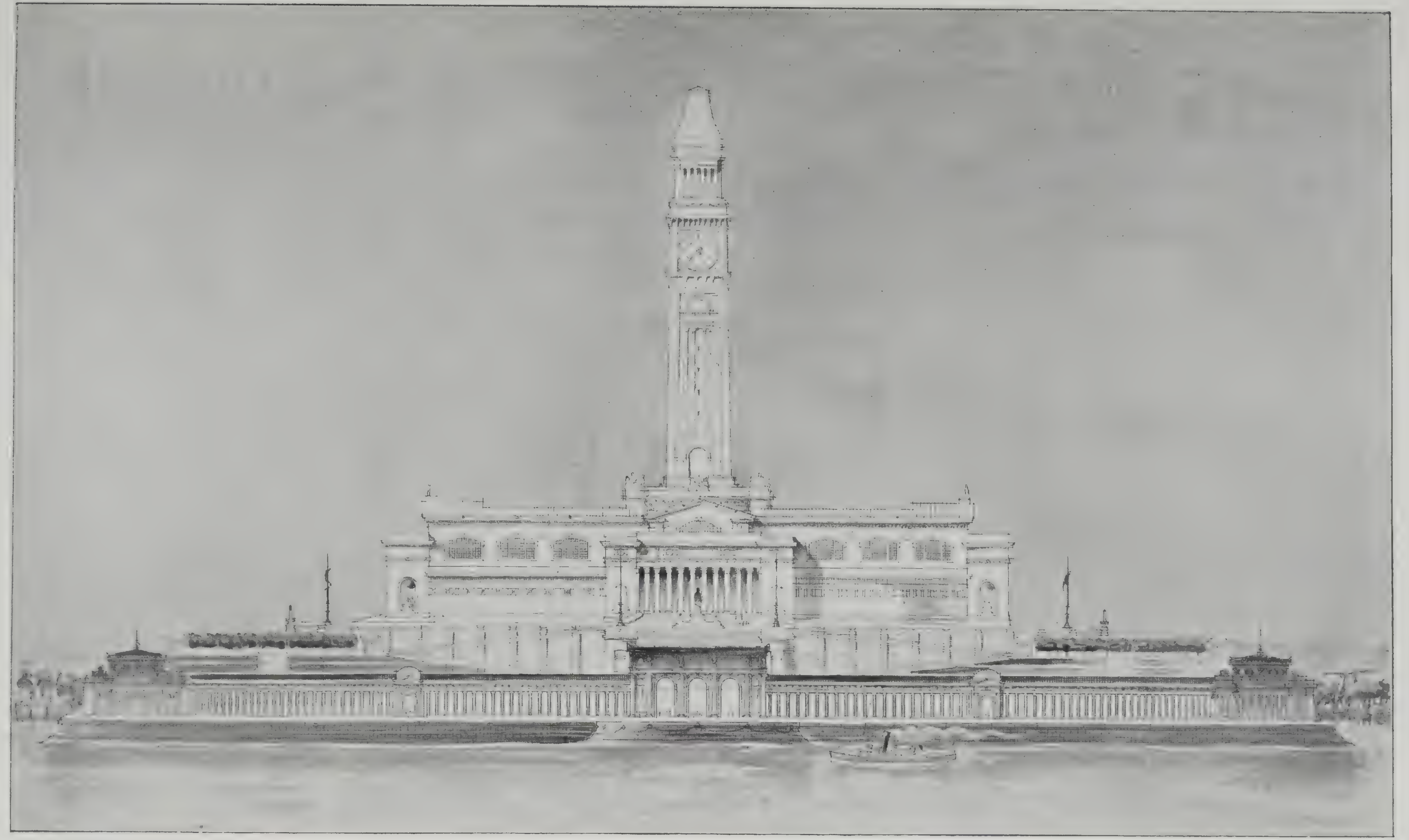
At a meeting of the General Pur
Committee of the Harrogate Town C
cil, held on December 29th last, the
lowing plans were approved: Mr. S
shanks's plan for new back road off
Parade, East Parade; Mr. F. Silver
plan for proposed shop front to No.
King's Road; plans for additions t
Alexandra Hotel, Prospect Place (N
Eastern Hotel Co., Ltd.); Mr. W
Jackson's plan for detached house in
wick Road; Mr. H. Wilson's plan
conversion of stables into cottages
garages off Victoria Road.


·SECTION·
LEADED GLASS·TRANSOM
W O O D
W O O D
W O O D
·COPPER·FLASHING·
COPPER·ROOF
JOINTS
1/2
·B R I C K·
·ENTASIS ON·BOTH·FRONT·&·SIDES OF·
·PILASTERS·
·ENTASIS·STARTS·
·2'2" FROM·TOP·OF·BASE
SECTION
1'-9 1/8"
8 1/2"
4 1/4"
4 1/4"
4 7/8"
2 7/8"
2 1/2"
2 1/4"
1 1/4"
1 1/2"
3/4"



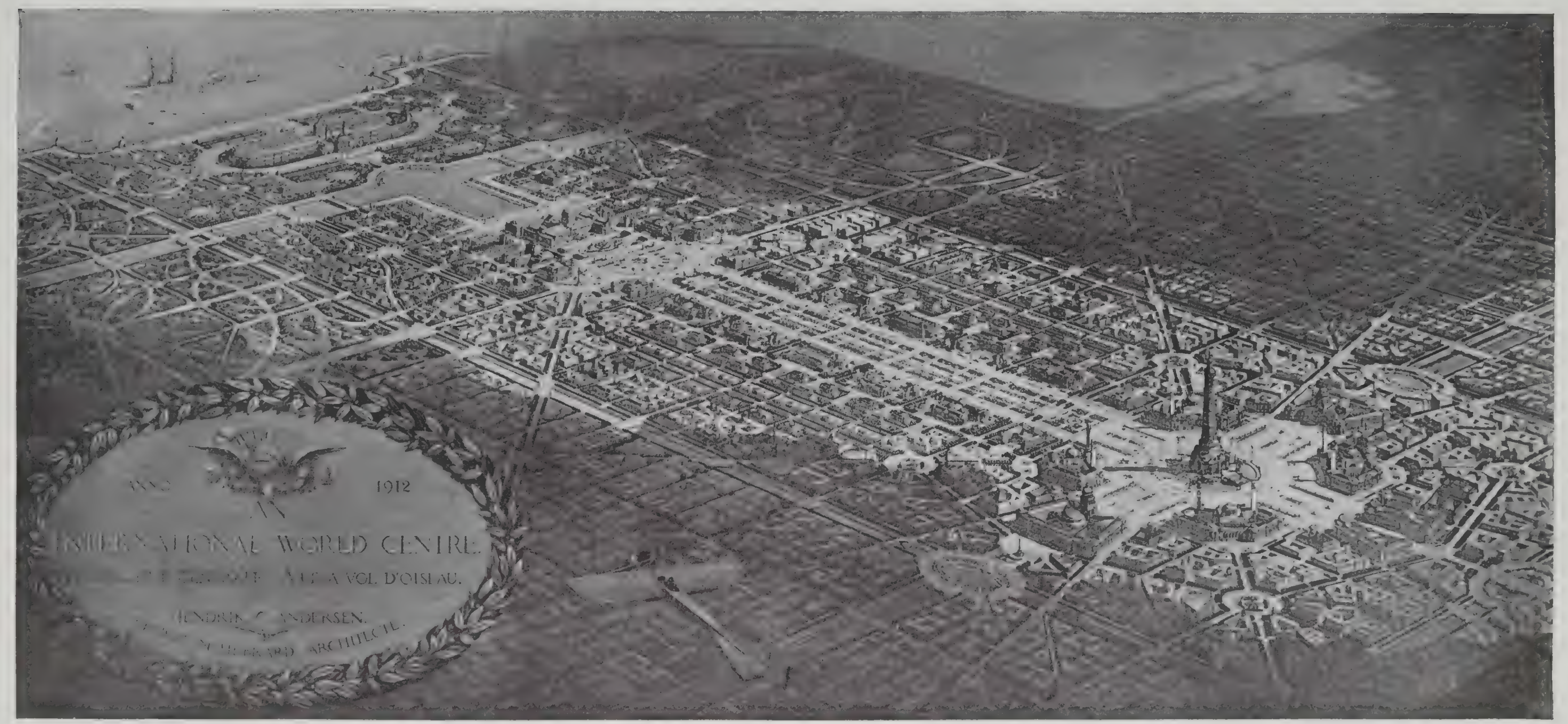
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XIV.—DOORWAY, MASON LIBRARY, GREAT BARRINGTON, MASS.

BLANCHARD AND BARNES, ARCHITECTS.



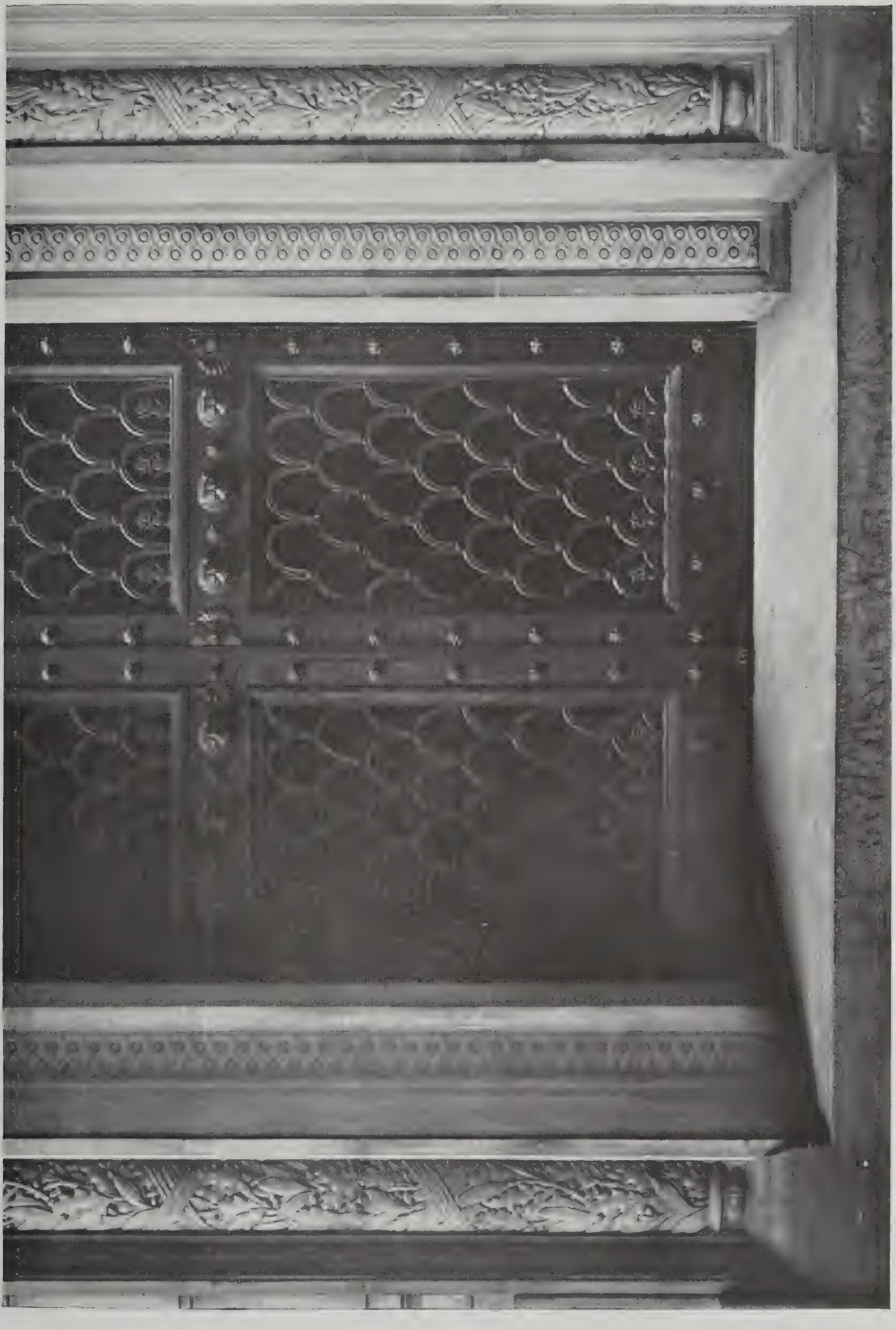
STUDENTS' DRAWINGS. V.—DESIGN FOR A MONUMENTAL BUILDING COMMEMORATING THE UNIVERSAL ADOPTION OF THE GREENWICH MERIDIAN.

BY F. JENKINS.



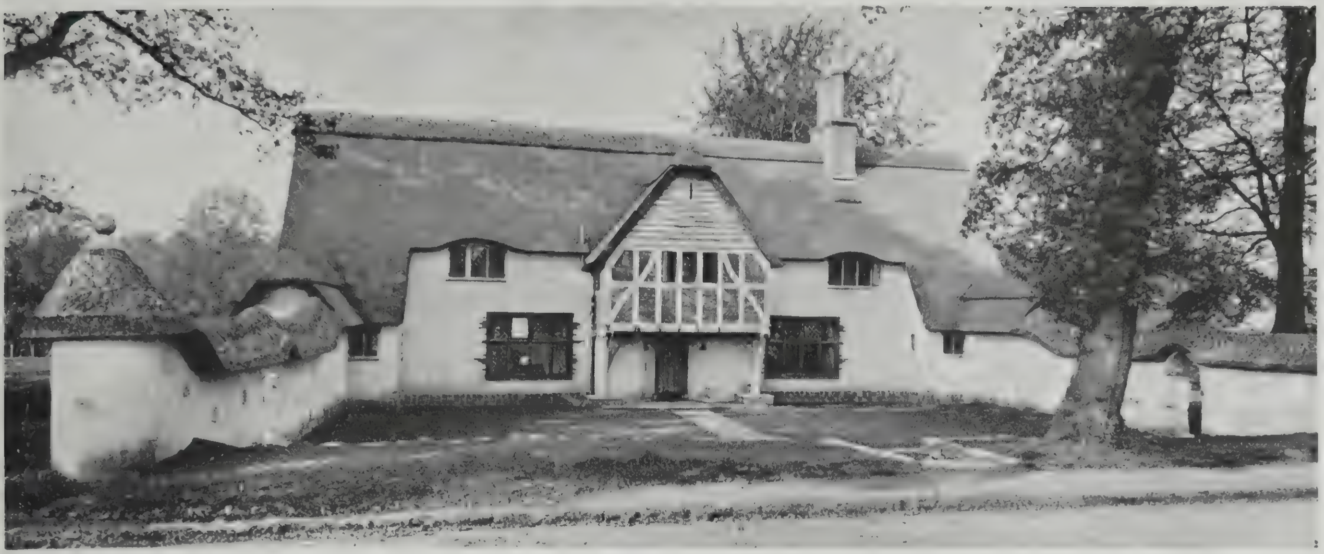
MONUMENTAL ARCHITECTURE. VII.—DESIGN FOR AN INTERNATIONAL WORLD CENTRE.

ERNEST M. HÉBRARD, ARCHITECT.

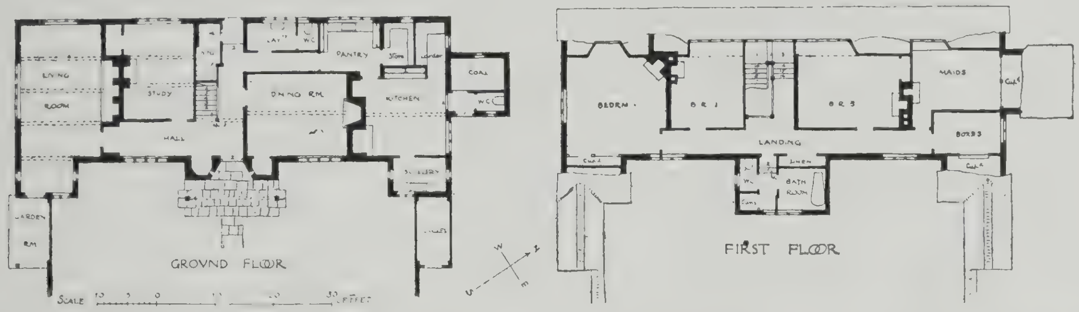


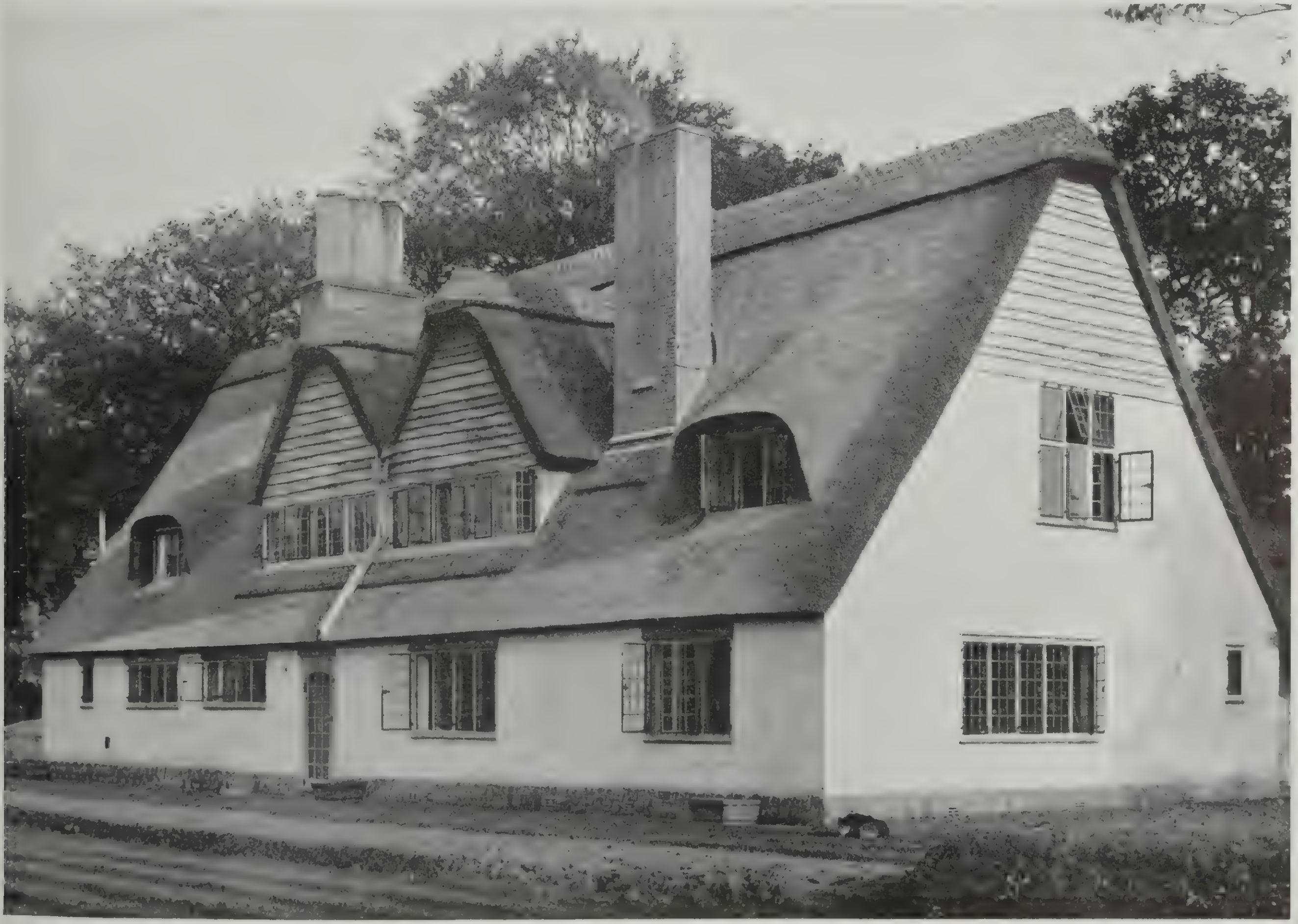
NEO-GREC DETAIL. XI.—DETAIL OF DOORWAY IN VESTIBULE DE HARLAY, PALAIS DE JUSTICE, PARIS.

J. L. DUC ARCHITECT.



Entrance Front.

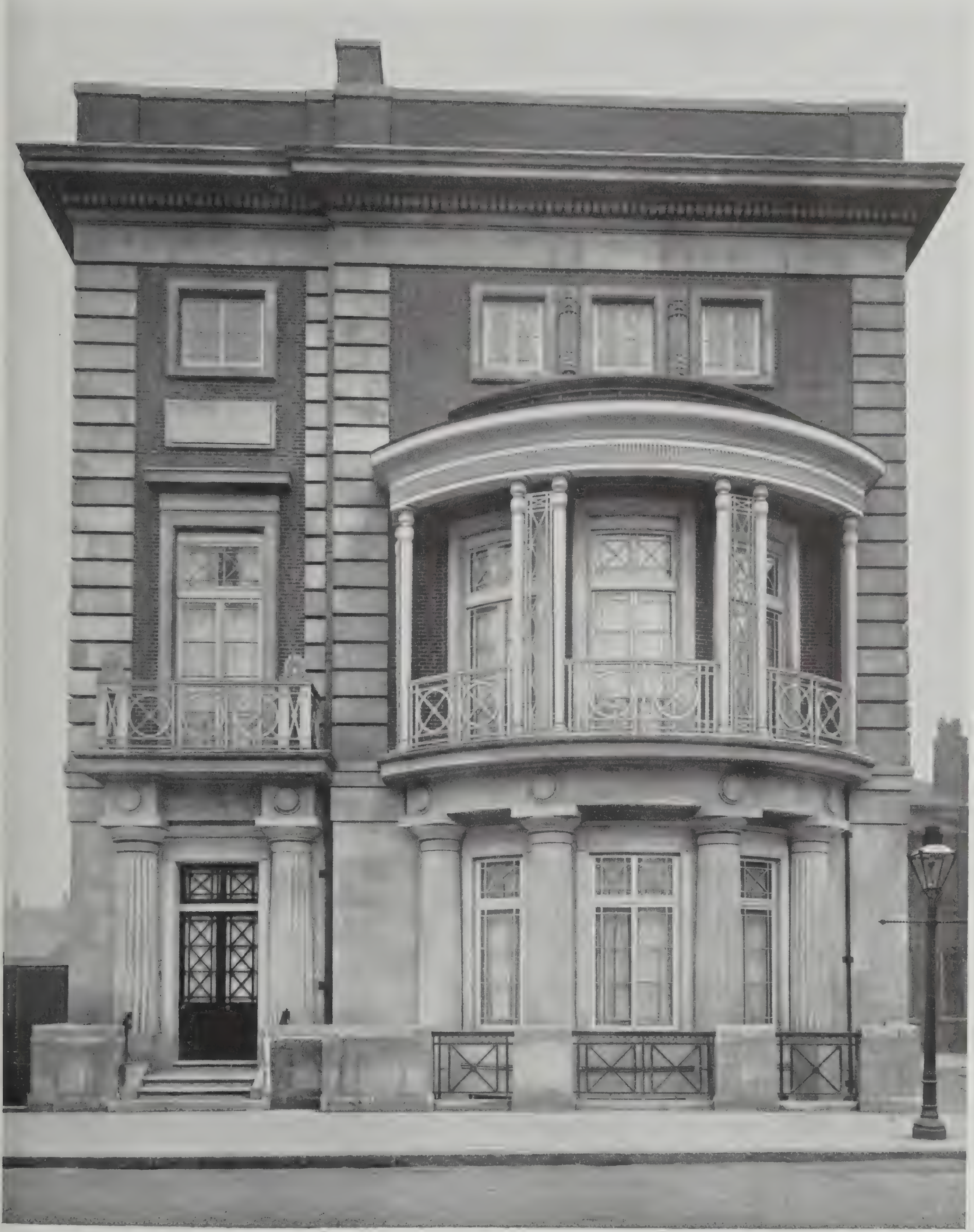




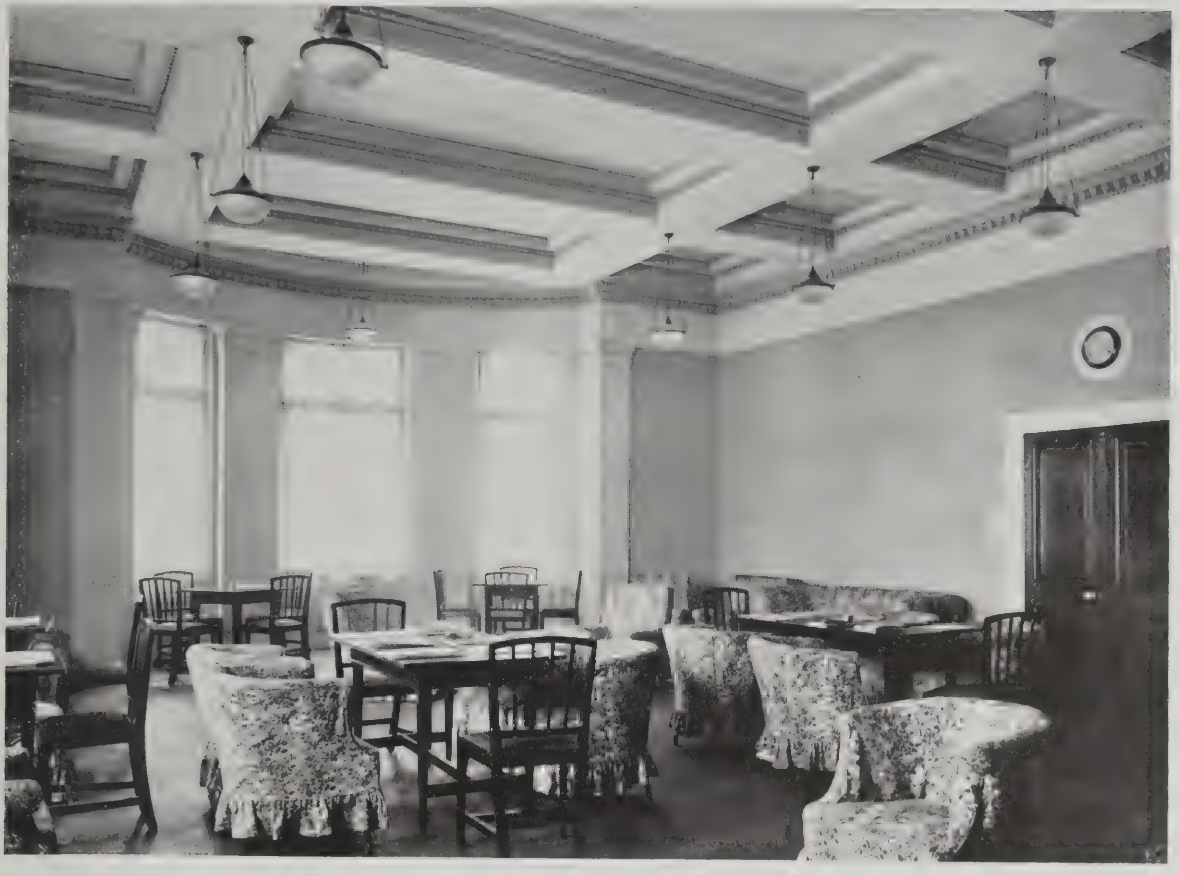
Garden Front.

MODERN DOMESTIC ARCHITECTURE. XIX.—"THE THATCHED COTTAGE," WEST BYFLEET, SURREY.

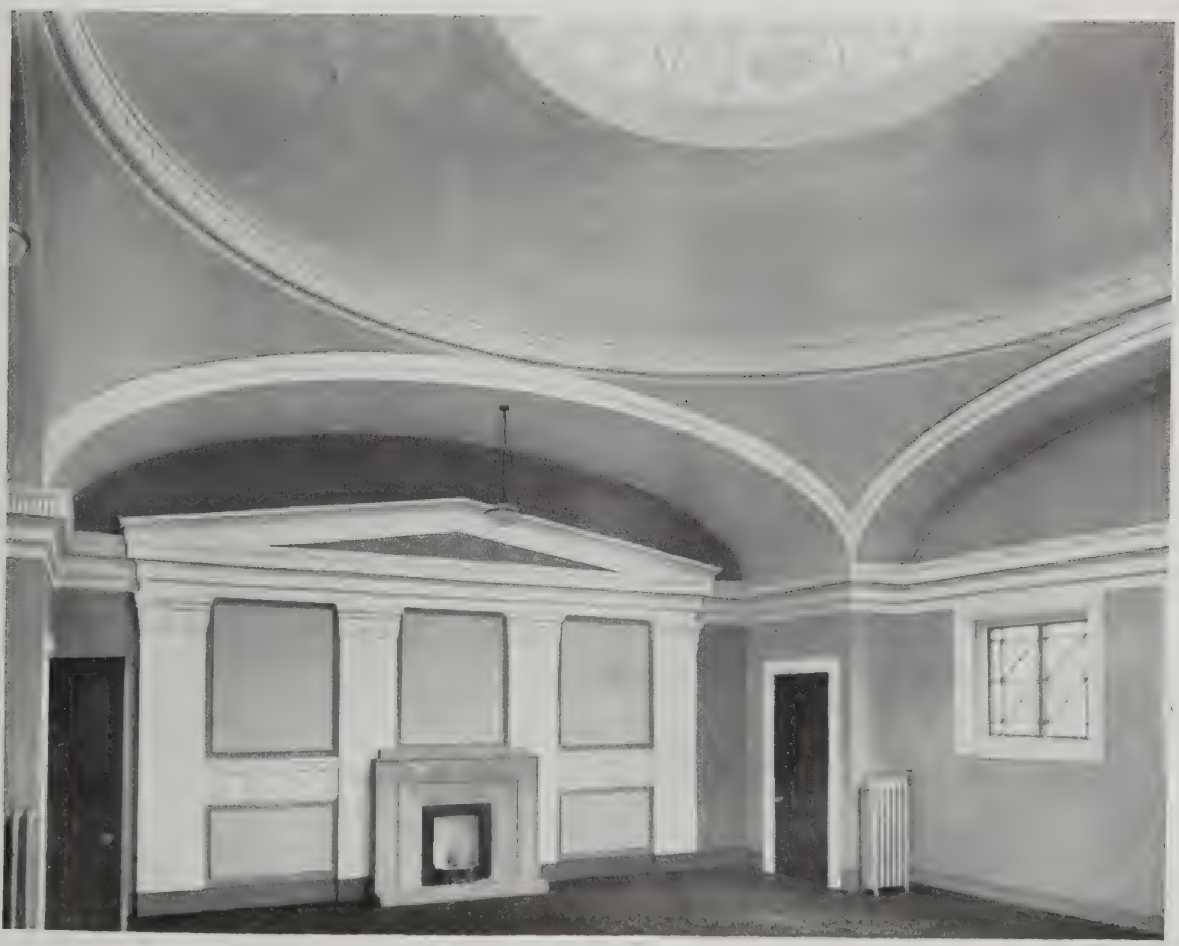
G. BLAIR IMRIE, ARCHITECT.



CURRENT ARCHITECTURE. XLIV.—STUDENTS' UNION, LIVERPOOL: FAÇADE TO WOMEN'S WING, MOUNT PLEASANT.
PROFESSOR C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.



Women's Reading-Room and Lounge, Ground Floor.



Room on Top Floor.

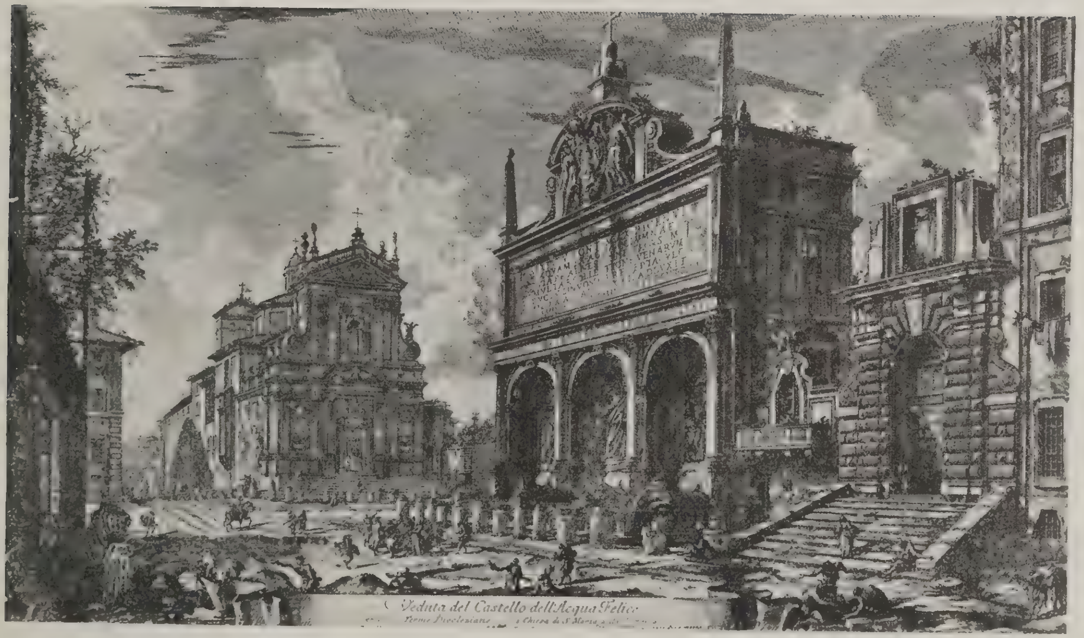
CURRENT ARCHITECTURE. XLV.—STUDENTS' UNION, LIVERPOOL.

PROFESSOR C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.

THE
ARCHITECTS' & BUILDERS
JOURNAL.

Wednesday, February 4, 1914. Volume XXXIX. No. 996.

No. 70.


Veduta del Castello dell'Acqua Felice
Terme Diocleziane
Chiesa di S. Maria

(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

FEBRUARY 4, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 996.

Cottage Architecture.

IN the Edition de Luxe of THE ARCHITECTS' AND BUILDERS' JOURNAL, which has recently been published, there appear a number of drawings and photographs of cheap cottages, and they enable us to obtain a very fair idea of some of the best work that has been accomplished in this important branch of architecture. But specimens, however interesting individually, do not promote the purpose for which they were collected, unless they move us to make critical comment upon them, so it would be opportune here to consider the main æsthetic principles that must be borne in mind if we wish to impart an element of dignity to a small dwelling, or to a group of small dwellings. Many people too hastily assume that when we are only allowed to expend the sum of £200 or £175 per house, it is utterly impossible to create anything of which an artist might be proud. On the other hand, there is a school of thought whose disciples have come to the conclusion that nothing is easier than to adorn a workman's cottage. Hence we have so many pretentious little houses, fussy, meretricious, overladen with decorative features; they are intended to be pretty, but their prettiness fails to charm. The truth is that the design of little cottages presents a most difficult problem, and one which is well worthy of the attention of the most talented members of our profession.

The study of town-planning and of civic design, which is destined to have such a great influence upon the development of architecture, will lead us to attach increased importance to these diminutive habitations, which, in virtue of their numbers, dominate our view on so many occasions; for it must be remembered that people of very small income constitute the vast majority of mankind. And in preparing perspective views of labourers' cottages an architect will not be satisfied with pictures that look pleasing enough when confined within the boundaries of his own drawing-board; he will bear in mind the effect which the cottages will produce when surrounded by others of a similar sort; and when this broader aspect has been considered it is possible that the form and character of his buildings will be profoundly modified. One reason why the small dwelling has not been elevated to the position of importance it deserves may be found in the methods of education that have prevailed until recent times. At the outset of his architectural training the beginner has always designed a small cottage, the reason being that such a building is very easy to construct; consequently, the cottage is associated in his mind with his earliest efforts in his art, and he arrives at the conclusion not only that the construction of a cottage is easy, but that its design is also an elementary matter. We believe this to be an erroneous view.

Nobody can inspect the drawings in the collection referred to without being impressed by the excellence of the plans. It is especially to be noted that without exception the architects have abandoned that old-fashioned type of plan, so beloved by the speculative builder—we refer to the arrangement in which th
scullery, larder, and other offices form a separate littl
wing at the back, with the result that in the case of
row of houses we have a series of little protrusion
whose ugliness not even the most skilful artist ca
redeem. Literally miles of this type of house can b
found in most of our large towns. It may be urge
that the back of the street is not intended to be seer
but the fact remains that we constantly see it, an
there is no reason why it need be an eyesore. It is
hopeful sign for the future that there is a tendenc
towards simplicity of planning, and an attempt is bein
made to include all the offices of a house within its fou
walls.

With regard to the elevations, it cannot be said tha
the same high standard has been attained. Eve
when a cottage has the simple plan which suggests
straightforward treatment, eccentricity may yet be dis
played in the disposition of the windows, and th
gables in the roof may be responsible for an effect c
restlessness.

The façade of a cottage does not look well if it ha
windows of half-a-dozen different shapes and size
Moreover, all very tiny windows should be avoided, fo
it is possible to put a frame of a normal size even in th
smallest room. When the wall of a house has ape
tures about one foot square it appears quite ridiculous

Roofs present a considerable difficulty. Withou
undue dogmatism, however, one may venture upon th
assertion that whereas a solitary house may appr
priately have several gables, these features should b
sparingly used where many cottages are congregate
together. Designers of the "picturesque" hous
generally imagine that they derive their inspiratio
from the work of our mediæval forefathers. But i
the old-fashioned English village nine roofs out of te
have their ridges parallel to the road; it never occurre
to the mediæval builders to bring part of a façade fo
ward for no other reason than to provide an excuse fo
a gable. A multiplicity of sloping lines and angula
surfaces cannot readily be composed into a harmoniou
whole. In fact the gabled house may always be co
sidered as somewhat of a country cousin whose boo
ish manners are tolerable in rural surroundings, bu
who is quite unfit for society. Of course there a
sophisticated gables, set out with curves, but even thes
are only pleasing when they are exceptional feature
The hipped roof, especially a high-pitched one, ma
also be unduly self-assertive; it does not bear repet
tion, and is seen at its best in the isolated countr
houses of the Georgian period. In a town the ide
thing is a parapet wall that almost hides the roof fro
view, but in the case of labourers' dwellings, whe
strict economy must be observed, it is usual to brin
the slates or tiles right down to the eaves gutter.
does not follow, however, that because the roof has
be exposed it should be obtrusive and sensational.
low pitch is nearly always preferable to a high one.
is by subtlety of composition and the elegant treatme
of doors and windows that the appropriate distinctio

an best be imparted to domestic buildings, especially such of them as are in a town or suburb, where one as a right to demand that they should be chaacterised by a certain reticence. X.

The London Lock-out.

MUCH has been said about the "tyranny" and the "autocracy" of the London Master Builders' Association in locking-out men who would not gn the "peace and penalty" document; and, on the her hand, there has been a great deal of wild talk out the "stupidity" of the men who refused to sign e agreement. Of course, such language is not held the responsible men on either side; but its diffusion the daily papers is nevertheless mischievous to a rtain degree, not because it tends to confuse the sues, but because it inflames on both sides the aniosity of which it is an unhappy symptom. Both sides ave had occasion for anger, but the sooner this dies own the less protracted and the less widespread will a dispute that, if further feeling be imported into may easily grow to disastrous dimensions. It is nfortunate that the trouble has occurred at a time hen, Parliament being in recess, certain sections of e lay Press are strongly tempted to make the most of obvious an opportunity to fill their yawning pages ith matter that, somehow or other, must be made teresting to the general reader, who has a Garganan appetite for sensation, but would be affrighted d affronted by a bald narration of facts, and still ore by any attempt at philosophical disquisition upon em. Otherwise it would be difficult to account for e admission into the columns of a London daily per of a paragraph like this: "A gentleman terested in the trade, who is also a member of the ity Corporation, said the best method of dealing with e dispute was to apply those recently used with great ccess in South Africa. Men who repudiated solemnly ade contracts so lightly deserved but little consideraon, and a determined display of armed force on the art of the authorities would soon put a stop to these esponsible and irrational trade disorders." Such "irresponsible and irrational" utterances ought not to reported. They cannot be too strongly deprecated a moment when both sides are tinder to every spark. ot much less regrettable is a shriek from the other de, which, with almost cynical impartiality, the same per publishes in the same issue: "The attitude of e London master builders we regard as the most nister attempt which has yet been made to crush out ade unionism . . . part of a considered policy to ush out trade unionism." Curiously enough, this ysterical charge was met by a categorical and an phatic denial in the same column in which it was ade, where there appears a brief report of Mr. Walter awrence, jun.'s, eloquent and temperate speech at e annual dinner of the Institute of Builders, when he served: "It was absurd to say that the masters were tempting to smash the trade unions. They had tered into bargains with the unions for many years st, and what they wanted to do was to prevent an use of trade unionism." This observation was eeted with cheers that attested the sincerity with ich the pronouncement was both uttered and ceived. Again, at the meeting of the National ederation of Building Trades Employers, it was ated explicitly that the employers "did not wish to ash the unions, but the workmen could not be owed to pick out such rules as they liked to follow, er accepting an agreement, and to disregard the hers. The penalty that the London masters prosed was the only means of making the individual rkman realise his responsibility as a unit." That is arly the whole case for the employers, and it is temrately as well as tersely put. Temperate, too, have en the several statements of the men's case by Mr. Stennett, chairman of the London Building Industries Federation, who realises that "it is a time for calm counsel," and who believes that if the representatives of the employers and of the men could be got together for the patient discussion of the points at issue, speedy agreement would result. Unfortunately the employers decline to recognise the organisation of which Mr. Stennett is chairman; and, generally speaking, their tone is suggestive of "penalty" rather than "peace"—of a determination to mete out condign punishment for insubordination, and to persist in it until the men offer guarantees of better behaviour. If the agreement-breakers were the only sufferers, the punishment would be just; but it ought to be taken into consideration that like suffering is being imposed on a loyal majority of the workers and their dependents; and that protraction of the struggle will inflict enormous and in many cases irreparable injury on the many professions and industries whose fortunes rise and fall with those of the building trade—on such non-combatants, for instance, as the builders' merchants, etc., many of whom are associate members of the L.M.B.A. For it is not only that existing contracts are held up: there is naturally a marked tendency to abstain from entering upon new ones. Those who are outside the conflict, but who stand to suffer much loss and inconvenience from it, are conjecturing rather anxiously how long it will take to reduce the Achillean wrath of the masters to the point at which they will be able to see more clearly that what they ask of the men cannot possibly be obtained from them in the precise form in which it has been prescribed. It ought not to be beyond the resources of diplomacy to attain the desired end by less exacting means; for, like the leader-writer in "The Times" of January 28th, "we are afraid that nothing will be of much avail unless the obnoxious document is withdrawn."

The Archaic District Surveyor.

IT does not greatly surprise us to learn, on the authority of a newspaper correspondent, that the office of district surveyor "dates from ancient days, since Fitzaylwin's first assize of building was drawn up in 1189 to encourage citizens to build of stone rather than with wood. . . . The first effective statute came after the Restoration in 1667, when the Act was passed for rebuilding the City of London after the Great Fire. This Act insisted upon the appointment of officials from whom the present-day district surveyors claim to be officially descended." They need not press this claim. Their system of levying fees is sufficient evidence of archaic origin. Although this is ancient, it is deadly effectual, for a return shows that since 1889 the surveyors appointed by the London County Council have received more than a million of money from the luckless builders. It seems that a circular sent to the London authorities calls attention to the fact that the difficulty of securing compliance with sanitary notices "is considerably enhanced by reason of the high scale of fees which the district surveyors are allowed to charge, which generally amount to as much as the cost of the structural alterations required," and this circular has stirred up the borough councils to urge the L.C.C. to take legislative action "with a view to the reduction of such fees." This does not go far enough. In our frequent references to the subject, we have always urged that fees should be entirely abolished, as there are strong reasons why district surveyors should not be in any way dependent on them, but should receive fixed salaries. Further, we have always held that builders and building owners should be entirely exempt from such exactions, which act in restraint of trade. More than a million sterling in rather less than a quarter of a century would be no very extravagant charge on the general community, on whose behalf, after all, these inspections are made; but it represents an enormous overdraught on a harassed and an overburdened industry: and 725 years is a long time to be haunted by the shadow of Fitzaylwin.

A Use for Basements.

A CORRESPONDENT of the "Manchester Guardian," writing on Garden Cities and the importance of not forgetting the garden, raises a pretty point of domestic economics. Structures, he submits, erected for the purpose of housing garden implements and other things spoil the look of a garden and should be banished therefrom, and their contents relegated to the basement of the house. As a consequence, every house should be built with a basement under the whole or at least part of the house, available for the storage of all garden tools, coal, wood, wine, etc. The storage room required by the occupants of an average Garden City house does not usually amount to the area of a complete basement, or even half a basement; but something in the way of cellarage might be devised at the rear of, and under, the dwelling, that would meet the demand for storage room unobtrusively, as well as economise ground space. The sole objection is the greatly enhanced cost of the whole building, and this, we fear, is the reason why the idea is not generally adopted at the present time; unless, indeed, the general disrepute into which basements have fallen because they have been abused and are regarded as old-fashioned and unhygienic is the reason for ignoring them "on principle."

Slates v. Tiles.

THE ancient rivalry between slates and tiles for roofing purposes seems likely to be revived in Wales, where a vast number of labourers' cottages, under State encouragement and with the aid of State grants, are projected; indeed, the "Western Mail" has already started a campaign in favour of Welsh slates. The latter have been, to some extent, neglected by architects, largely on æsthetic grounds, but it is now claimed that "artistic colour effects could also easily be obtained by a proper grouping or blending of the various colours and shades which the Welsh quarries now produce." It is probably true that the chromatic possibilities of slate have not been sufficiently considered, and the custom of using large slates, 20 by 10, or thereabouts, laid in monotonously even courses, has undoubtedly tended to obscure the æsthetic value of this material. It is also true, in a general way, that a building roofed by capable hands with local material has an inherent virtue of its own. But we are disposed to think that the drawbacks to the use of natural slate are economic rather than artistic. Though cheap enough in itself, it is a heavy material, demanding heavier, and so more expensive, roof timbering to carry it than would be required by a building roofed, say, with artificial slate. Investigation may still disclose the existence of an economic balance in favour of slate; but an impression that the balance is on the other side has of late gained currency.

The Condition of St. Paul's.

THE Report of the Committee at present engaged in investigating the condition of St. Paul's is awaited with some impatience owing to the confusing and contradictory statements relating to this matter that have recently appeared in the general Press. Last week it was announced that an interim report prepared by the architects was under consideration by the Dean and Chapter, and that the gist of its conclusion was that the statements as to the subsidence of the building have been very greatly exaggerated. This is supported to some extent by the experiments carried out by the engineering department of the National Physical Laboratory as to the effect of vibrations caused by traffic; the result of which was an expression of opinion by the advisory committee that the small vibrations shown are in no way injurious to the structure of the Cathedral. On the other hand, Canon Alexander is reported by the daily press to have said that while the architects' report was reass
ing the engineers did not take the same line.
also said, unless he has been misreported, that
vibration question, so far as he was aware, had
been dealt with by the Committee at all; and th
with regard to the Cathedral itself, "a very large a
costly scheme of work would have to be carried o
In view of the prevailing uncertainty as to how mu
if anything, is wrong, the Report should be publish
as quickly as possible. Delay can only mean grea
confusion in the public mind. There are signs alrea
of an inclination to revive the dispute over the L.C
tramway borings, and if the party clamours once be
to rise, the importance of the Cathedral's safety
likely to be obscured.

Examinations in Town-Planning.

THE syllabus of examinations held by the Insti
tion of Municipal and County Engineers
been altered by the addition of a new subjec
town-planning. The subject is optional, and only
candidates who have received the Testamur of
Institution will be allowed to sit for examinati
therein; a certificate will be given to candidates w
satisfy the examiners. We gather from the details
the syllabus that little more than a general knowled
of principles, and of the existing laws affecting tow
planning, is expected, but the departure is interesti
as a striking recognition—though somewhat tar
perhaps—that town-planning has become a practi
proposition. The practical and professional inter
thus shown by municipal engineers should be w
comed by architects as a further stimulus to their o
activities in a matter in which they will be careful not
allow themselves to be outstripped, lest co-operati
which is essential, should degenerate into mere rival
which would be untoward for all concerned, and ab
the worst misfortune that could beset a movement th
as shown in our recent article on the Town Planni
Institute, needs a philosophical co-ordination of all
talents.

Railway Stations and Civic Amenity.

SWANSEA Corporation Parliamentary Committ
have, we are delighted to see, raised a frien
protest against a proposal by the Great West
Railway to impose upon the town the customary ty
of station elevation. A town of Swansea's growi
importance, it is urged, deserves a more dignifi
elevation. In response to this protest, the compa
have replied that "they could not see what use
purpose would be served by a more elaborate ele
tion." Swansea Corporation will render an importa
service to the entire community by persevering in t
effort to extend the company's range of vision, whi
appears to suffer from the myopic astigmatism t
prevents railway companies from seeing "an in
beyond their noses," or of seeing straight even wit
that limited range. That good architecture is go
business is a proposition that needs to be forci
driven home in many directions, but more especially
the case of the British railway companies, which ha
been signally oblivious to the more enlightened vie
to which effect has been given on the Continent a
in America. But whether or not the company wou
be rewarded with a commercial profit on æsthe
investment (as we certainly think they would) is
inferior consideration. Of major importance is t
right of the community to insist that railway co
panies shall not be allowed to persist in their invetera
habit of disfiguring town and country with their ug
"utilitarian" abominations. We trust that t
Swansea Corporation Parliamentary Committee w
see to it that the elevation of the High Street stati
shall be more in accordance with the country's new
awakened sense of civic amenity.

THE PLATES.

In International World Centre: Design for a “Tower of Progress.”

HEBRARD'S design is fully discussed in the second portion of Mr. Edwards's article on “A World Centre,” by H. C. Andersen, which we lish this week. Our last issue contained the instalment of Mr. Edwards's article.

illon Turgot, The Louvre, Paris: (1) *Façade and* (2) *Detail.*

his building, by Louis Tullius Joachim Visconti, probably commenced in 1852. In 1850, Visconti appointed architect to Napoleon III. His work on Louvre and on the Gallery uniting the Louvre and Tuileries was begun in 1852, and completed, after architect's death, the following year, by Lefuel. s façade is extraordinarily rich in ornament; one s especially the decoration of the central part and sculpture grouped above the windows in the Man- roof. The effect, though a trifle overloaded, has onumental quality that justifies the exuberance of detail.

“Amersfort,” Berkhamsted.

s a modern country mansion, on Georgian lines, nersfort” has been infused with a good deal individuality by its architect, Mr. Ernest mott, F.R.I.B.A. The two wings are con- ed by a paved terrace, from which delight- views over the garden and the surround- country may be obtained. The whole of internal joinery is in English oak, and also the cipal staircase. The builders were Messrs. ıklin, Ltd., of Deddington, Oxon., and the sub- ractors were: Messrs. Collier Bros., of Reading cks for dressings and roofing tiles); Messrs. G. nks and Co., Ltd. (sanitary fittings); Messrs. ham and Sons, Ltd. (ranges); Messrs. Thomas ey, Ltd. (grates).

ing, Gilmour Hall, Students' Union, Liverpool.

he plate we publish this week illustrates Professor ly's treatment in design and detail of the ceiling of Gilmour Hall. Particulars of the building will be d in previous issues.

ingham's Designs for Ironwork: Window Guards and Balcony Railings.

uring the industrial revolution of the nineteenth ury the design of balcony railings, etc., suffered in non with other architectural accessories; though rly there has been a distinct improvement. Cot- ıam, practising as an architect in the early years of entury, came just before design and craftsmanship n to decline seriously, and his designs preserve of the good quality which was inherent in the tional work of the eighteenth century. The gns for ironwork which we publish are full of est, and show a good deal of variety and of decora- inventiveness.

ent's Drawing. Church of St. Mary-le-Strand, London. James Gibbs, Architect.

is drawing, by Mr. H. C. Mason, won the Royal demy silver medal, and is of special interest both ccount of its draughtsmanship and because of the rtance of its subject. James Gibbs was certainly greatest of Wren's disciples, and St. Mary-le- nd is probably the best monument to his genius.

* As in future the illustrations in this journal, in majority of cases, will be from photographs of ings, the Editors invite architects to submit photo- hs of their recent work. When the illustrations given as full-page plates twenty-five copies on art r will be sent to the authors. Architects will realise that many conditions, which may not occur to them, cover the selection of illustrations for a technical journal, and that when photographs are not used it does not necessarily imply that the work is not worthy of publication: it may happen that at the moment the illustrations do not fit in with the general scheme.

For convenience in filing them for future reference, a special portfolio for the plates has been prepared. All readers having, or placing, a standing order with a newsagent to supply the JOURNAL each week for twelve months can secure one of these portfolios free of all cost, by sending in an application to our offices at Caxton House, Westminster. Extra portfolios 1s. each.

“WHO'S WHO IN ARCHITECTURE.”

AS previously announced in these columns, we have made arrangements for the early publication of a volume entitled “Who's Who in Architecture.” This will be of two-fold interest, first as embodying brief biographies of members of the profession whose achievements merit notice, and, secondly, as comprising a full list of architects in practice throughout the Kingdom. As regards the personal data, it may be pointed out how absorbing all such information is. One learns, for instance, with the greatest interest where such and such architects were educated, with whom they were articled, when and where they commenced practice, what competition successes they have secured, and what buildings they have erected. It is, in fact, the personal data that make biographies so fascinating. In a volume like “Who's Who in Architecture” it is obvious that the information must be given in a very succinct form; nevertheless, the essential facts are included, and it is these which will give the book so direct a personal interest. The particulars will be fresh to the great majority, for it is surprising how little the bulk of the profession know of the careers of even their most distinguished members.

Then there is the second aspect of the matter, the everyday particulars, such as addresses (private as well as professional—a most useful combination), club, telephone number, etc., which will give the book a value as one for constant reference. At the present time no such volume is ready to hand, so that this dual merit of “Who's Who in Architecture,” embodying at one and the same time the data of the biography and the details of the directory, will claim for it a place on the bookshelf of everyone concerned with the practice of architecture in this country.

For convenience in obtaining the necessary particulars, we have had a folio form prepared. This has been circulated among architects, a very large number of whom have already returned the forms to us duly filled in. In the rush of modern work, however, it is common experience that matters of this kind get overlooked. Such appears to be the case in the present instance, for, though we have requested those architects who have not returned their forms to do so without further delay, a certain number have not responded to our request. We would therefore take the present opportunity to urge them to give this matter their early attention, as the volume is now in process of compilation, and it will facilitate the work if we can get all the forms sent in as soon as possible.

The volume will be well bound in cloth, with gilt lettering, and, when published, will be issued at 10s. 6d. nett: by application now, however, copies can be secured *by architects* at the special reduced rate of 5s. 6d. nett—an offer which should be taken advantage of while it remains open.

Any further particulars of the book, together with forms to be filled in, and stamped addressed envelopes for their return to us, will be readily supplied on application to the Editor, “Who's Who in Architecture,” Technical Journals, Ltd., Caxton House, Westminster.

HERE AND THERE.

THIS week I propose to discuss a trinity of bad taste—(1) of the public, (2) of the manufacturer, (3) of the designer or craftsman; all of which, rolled into one, constitute the bad taste of the times. The subject of good and bad taste is an equivocal one, and is best approached cautiously, otherwise there will be blusterers ready to annihilate the simple investigator. One hesitates even to accept canons, because they change with every generation, so that the position which was generally accepted as sound a quarter of a century ago will to-day be assailed from many sides. Canons are dangerous things when matters of art are in question. To take an instance; think of all the special pleading of the early enthusiasts of the arts and crafts movement. To paint a plate with roses and leaves in a naturalistic fashion was then regarded as a heinous offence. The flat "decorative" treatment was put forward as the only proper one, perorations on the subject usually concluding with the assertion that in all periods the naturalistic treatment had been the sure sign of decadence. To-day, however, for whatever reason we like to give—that we are "broader in our sympathies," and so forth—connoisseurs will be found rummaging in the "curiosity" shops, ready to seize with avidity the very pieces of china which were anathematised by a former generation. We are constantly congratulating ourselves upon having emerged from the artistic gloom of the Victorian period into the fuller light of the twentieth century. I will not deny that there certainly has been a substantial general improvement, but one has only to walk around the average suburb, studying the architecture of the houses, and the furniture and bric-a-brac which fill them, in order to appreciate the fact that the trail of the serpent is not by any means wiped out yet.

* * * *

We seek a reason for the persistence of bad taste, and this at once brings us to the threefold aspect of the matter outlined at the head of this column. When hard pressed, and asked to give an account of himself, the craftsman explains that he is merely a tooth in the wheel of modern commercial activity, and that what he produces is done to the direct order of his master, the manufacturer. So we turn aside to this latter, and, in reply to our question, he excuses himself by saying that he makes what the public will buy, and cannot afford to do anything else. This brings us finally to the public. It is rather a nebulous body, and does not base its opinions on any sound knowledge, but simply on its likes and dislikes. We will assume, however, that it can give a definite reply to our question, and this will be that the public can only buy what the manufacturer makes; which means to say that, for example, if the public wants to buy a chair, it can get one of the saddle-bag type, fulsomely carved, for less money than a plain chair following a Sheraton or similar better model. The result of this investigation must be that the indictment is against the manufacturer. He stands in the position which the patron occupied in a former century, though we will acknowledge at once that his unfavourable commercial surroundings make his case an unfortunate one in so far as the promotion of the best work is concerned. Nevertheless, if only he were a man of taste himself, he would be able to put goods on the market of a far better character than he usually does at the present time.

* * * *

It is a most intricate problem to probe to the bottom, so many are the ramifications. The "art master" in the art school, though apparently disconnected from the subject, is in reality a protagonist, for it is he who directs the indifferently educated youths who become in time the trade designers whom the workman has to follow. The workman himself has the misfortune to be brought up on a glut of bad taste, and it is not surprising therefore that, as an artistic craftsman
should be so deficient. Above all, there has t
taken into consideration the entire system of the
tory and the machine, which, though directed
wrong channels, constitutes the main supply.
matters were on a different basis a hundred years
more ago is evident from the articles themse
When, for instance, the eighteenth century is surv
as a whole, and we observe the spirit of good t
which pervaded everything, from the designin
houses down to the fashioning of a door-key or a
spoon, we begin to realise what a tremendous lot t
is to explain away in the ordinary commercial wor
our own times, albeit that work is an improvemen
what was done twenty-five or fifty years ago.

* * * *

I have before me a handbook dealing with a s
tion of old trade catalogues in the Departmen
Engraving, Illustration and Design at the Vic
and Albert Museum, South Kensington. These
logues are illustrated by a number of plates, elega
engraved. They were not produced as pattern-b
for the craftsman to follow, but purely as trade
issued by firms to their customers. In point of
they range from the second half of the eighteenth
tury, when the best traditions of design and handi
were being followed, to the first quarter of the
teenth century, when the decay had commenced t
in. Brass hinges, ornaments for furniture,
escutcheons, candlesticks, harness mountings, mir
and a score of other things are illustrated, and the
is marked against most of them in pleasant scrip
price, by the way, which is often a sixth of what t
goods realise to-day in the hands of dealers in anti
The designs, with few exceptions, are excellent,
the workmanship first-rate. If side by side with t
catalogues one were to put a similar collectio
modern trade catalogues, it would be seen at a gl
what a gulf separates the two. The developme
the trade catalogue is well summarised by Mr. W
Young in the handbook referred to. He says:—
these days . . . it is a little difficult to visu
the conditions under which business was condu
when the personal appeal was practically the
medium of communication for the introduction of
goods. . . . About the year 1770 manufact
(in the Sheffield plate and Birmingham brass indus
especially) had begun to send drawings of their g
to their customers. At first they were loose sh
Later these were bound together, and so devel
into a catalogue. Other manufacturers followed
and, by the dawn of the nineteenth century, lists
been prepared to illustrate a considerable rang
English-made goods."

* * * *

To attempt, with righteous indignation, to deter
who was responsible for all those hideous cast
grates, with lumpy repoussé brass hoods and clam
tile panels, which are accorded honoured positio
the average ironmonger's shop, would lead m
beyond the limits of this page, and would, after a
an unprofitable undertaking. Undoubtedly the k
the whole situation lies with the manufacturer
only he could be reformed, half the defects that
confront us would be got rid of. At a time whe
formation of societies is pursued with exhilarating
sistency, an enlightened body of men might do w
than revive the old pattern-book system, and so
into the hands of manufacturers a series of m
which might be copied wholesale, thereby contrib
largely towards improving the taste of the public,
as may be said eloquently on their behalf, have g
take what they can get—at a price.

UBIQU

CORRESPONDENCE.

ditors disclaim all responsibility for the statements made or opinions sed by correspondents, who are asked to be brief, and to write on one side only of the paper.

The Causes of Labour Unrest.

he Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

IRS,—In the admirable article in the JOURNAL of
iary 14th on "The Crisis in the London Building
de" the writer says: "The events that have led up
are, of course, more easily explicable than their
rlying causes, the former being simple, superficial,
obvious; the latter complex, deep-seated, and
ure." The causes may be complex and deep-
ed; but to say they are obscure is hardly correct.
events that have led up to the crisis, and their
lts, are very much before the public just now; and
sual in these matters, a truce will probably be
hed up, and the old, unsatisfactory relations of
loyer and employed will be resumed. Is it not
h while, therefore, to look for some of the deeper-
d and more complex causes in order that the
lem may be considered in a rational and scientific
ner? If the causes can be located, there will be a
ce of removing them; and only in this way can
ng peace be secured.

ithout pretending to exhaust the list of causes, I
ure to submit the following as the most important
ng those which have brought about our present
rtunate industrial relations. The only bond exist-
in most cases between the employer and his
loyees is, nowadays, that which Carlyle described
ne "cash nexus." Very little of the old human
ionship that at one time bound employer and
man together now remains; and neither trade
ns nor employers' associations are doing anything
store this human element. The growth of our
nt form of industrialism and purely commercial
t has left little room, if any, for the helpful and
dly co-operation that existed under simpler condi-
. Neither employers nor workmen are directly
nsible for this state of things. All are creatures
olled at present by powerful economic forces that
been assumed as natural laws against which it was
to strive, however much we might deplore them.

ien, again, the introduction and growing utilisa-
of machinery have had much to do with lessening
ride in his craft which used to be such an element
aking a man's work a pleasure to him. Machinery
played a part in cheapening production, and
bly in lightening toil: but the price society has
o pay for this in other directions is not sufficiently
into account. The constant tending of a machine
soul-destroying occupation, and association with
iine production in any form tends to create the
ianical and listless mind.

nother, and perhaps the most immediately potent,
of the present labour unrest is the fact that as
as the present wages system continues it is not
ble to raise wages. We may increase a man's
y wages; but the purchasing power of his money
speaking generally, decreased at a more rapid rate
his wages have advanced. His wage is only of
in what it will purchase in order that he and his
ndents may live; and it seems to be an inexorable
omic law that the wages a man gets are only just
ient to enable him to do this. Of course, this
es to wage-earners generally. As yet, they only
realise what is wrong. In spite of larger money,
er nominal wages, they know that in reality they
o better off. They also realise, perhaps not quite
mly, that considerable numbers of people who are
wage-earners somehow get a much better time
they do; and, without inquiring too closely how
omes about, they feel that they are not getting a
share of the things they help to produce. If, therefore, we would secure a system under which employer and workman could work together on satisfactory lines, we shall have to cease taking the present conditions for granted and search round for a better way. Why should not master and workman co-operate in producing work better in quality and more in quantity than is the case to-day? Why should not the work be such that both workman and master could take a pride in it for its own sake, and not merely for the sake of any profit that can be made out of it? Why should they not share on a more equitable basis the remuneration which the public will pay for work well done?

It is not beyond the wit of man to devise a working system by which these objects can be accomplished. In fact, such systems are in operation now, though not on a very large scale. In some form, partnership between capital and labour is capable of mitigating, if not of entirely solving, the problem. I do not refer to those institutions which merely sell or give shares to their employees, and in that sense make them small, fractional partners; but to schemes on a wider and juster basis, where employees get a relatively large interest in what is being done, both in co-operating in the management to an extent which the exigencies of the business will determine, and in getting such a share of the accruing profit as will be a real, and not merely nominal, addition to their wages. Individual firms can move quickly in this direction; but, ultimately, it is probable that such co-operation will take place on a large scale between organisations of employers and the unions of the operatives. Such an arrangement might be the modern counterpart of the old Guild system.

These suggestions are, no doubt, very imperfect; and it may seem impertinent to offer them. It behoves employers, however, and more especially those in the building business, to take a wider view of things than the mere mechanical carrying on of business. The human relations cannot be ignored. A consideration of the points suggested may serve as a starting point for thought, which, in the end, may result in better relations between those who pay wages and those who receive them. One thing is certain, the existing conditions are inherently rotten because they are inhuman, and therefore cannot continue.

AN EMPLOYER.

"A Combine of Combines."

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—With reference to the article in your issue of the 14th inst. under the above heading, we are very much surprised to read the sweeping statement attributed to Mr. Donald: "That the various materials which go to make up a modern building are practically all controlled now by separate combines."

We leave manufacturers of other kinds of materials to speak for themselves, but with regard to all that important branch of manufactures in which we are interested, we can state that no combine or ring exists among manufacturers of door and window fittings, art metal work, metal casements, etc. We have not even heard of one being mooted.

We suggest that if combines exist in other trades the natural cause may be traced to the excessive competition among factors and merchants, who, whatever the manufacturer's price may be, want still better terms in order to cut out their rivals, and whose operations against each other can only be carried on beyond a reasonable point by exerting more and more pressure on the manufacturers up to breaking point.

But speaking for a large class of manufacturers of building fittings, ourselves included, we are entirely outside the range of Mr. Donald's statement, being also outside any combine or ring.

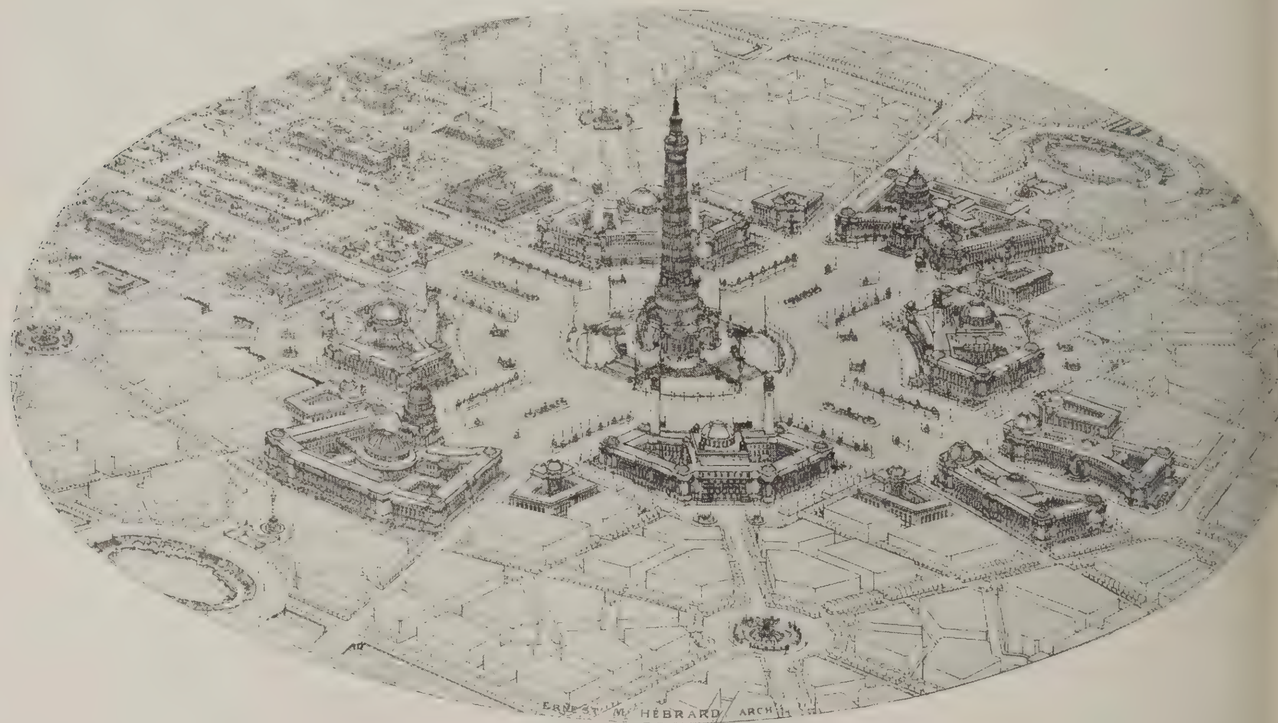
ROBERT ADAMS, per SIDNEY J. ADAMS.
3 and 5, Emerald Street, Holborn.

CREATION OF A WORLD CENTRE OF COMMUNICATION.—II.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, B.A.

IN the last issue of this journal the opinion was expressed that the World Centre was conceived upon an excessive scale. We feel enervated rather than inspired at the sight of such vast units. Society itself appears to be belittled by such a gigantic structure as the Tower of Progress.

But, putting aside the question of scale, let us ask ourselves whether the architectural forms employed in this design have been disposed in a manner which is in accordance with the best traditions of the past. Traditions are not inviolable, but, on the other hand, it is probable that all well-established usages owe their longevity to the fact that they are founded upon reason. Towers and domes cannot be erected merely to please the fancy of an artist, but have their own peculiar significance; and there are not only social but æsthetic principles which must be taken into account.

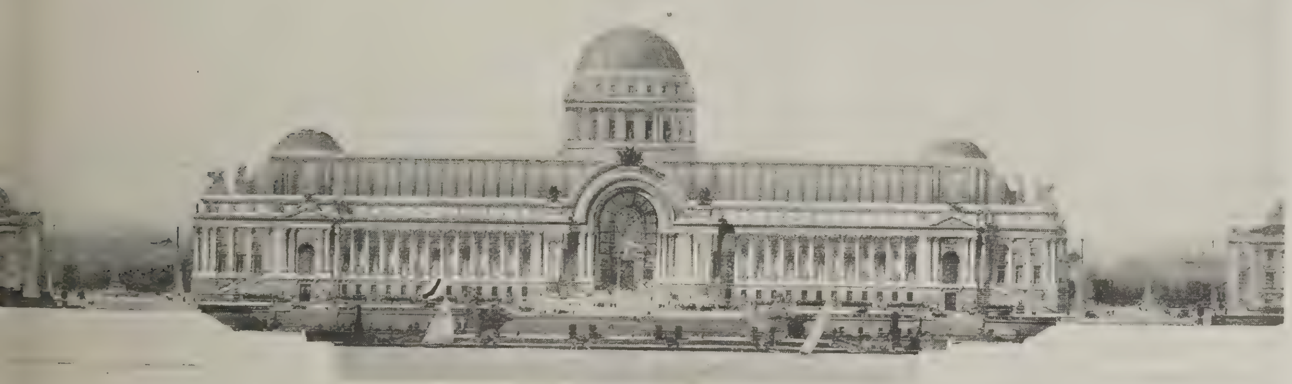


A WORLD CENTRE OF COMMUNICATION: THE "TOWER OF PROGRESS" AND SURROUNDING BUILDINGS.
ERNEST M. HÉBRARD, ARCHITECT.

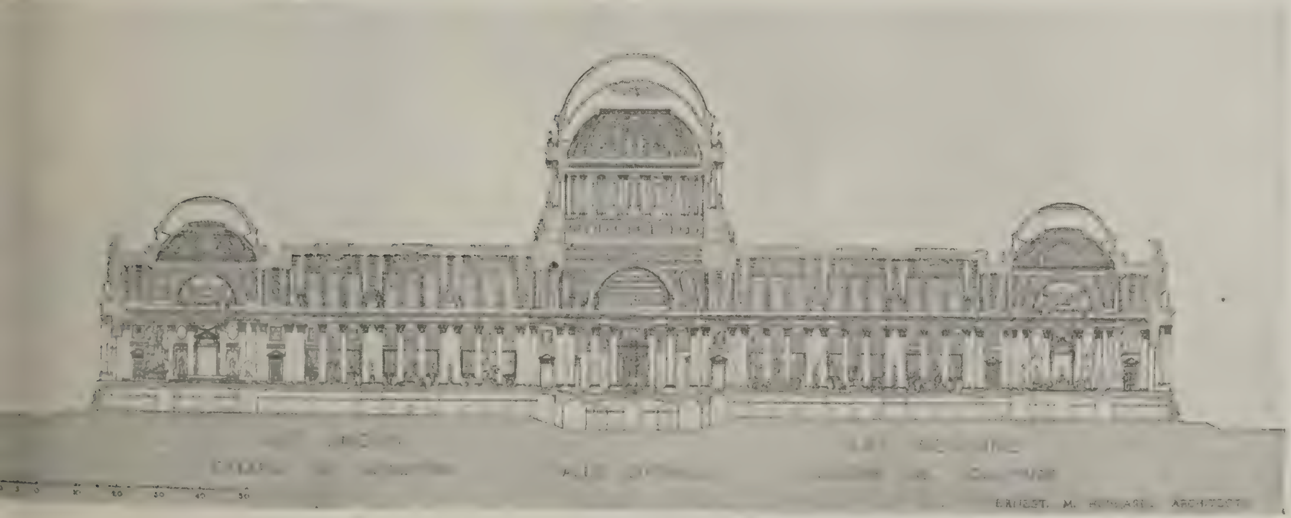
All the other buildings in the city have been kept comparatively low, in order that this Tower of Progress may assert itself. There seems to be a confusion of motives here. Our authors started with the conception of a meeting place, a crossing of the roads which was to be accentuated by an immense tower shaped somewhat like an obelisk. Afterwards they decided that a great city must be built to house the idealists who would be attracted to the world's capital. The consequence is that the tower that originally served to mark a particular centre (which function it was admirably fitted to perform) is made to preside over a city, and for this it is quite inadequate. A tower of narrow proportions cannot be invested with the presidential manner. It looks best when used as a foil to lower and more substantial buildings. A Turkish mosque and its minarets form a most impressive composition. The Campanile in St. Mark's Square at Venice, although it lifts its head so high, is really subordinate to the cathedral and library. The Tower of Progress when seen far out at sea would seem but a solitary spike, which had very little meaning; nobody
would ever suppose that it had been built to exp
the nobility of communal existence. There is so
thing restless and temporary in a single skyscra
rising high above a city. A stumpy church tower lo
very well as the principal feature of a small cour
town; and a steeple is the natural climax of a
turesque village. But in the case of a city spread c
a considerable area, a dome will always outbalanc
dozen spires provided that they are not absurdly
When we have a view of Oxford from one of the
rounding hills the Radcliffe Camera is obviously
centre of interest, while St. Mary's steeple looks all
better for being placed in contrast to it. In the pres
design, however, there are about fifty domes that
all made to look insignificant in the presence of
skyscraper, and this itself suffers through being pu
a position of eminence of which it is not worthy.
true that an attempt has been made to support
central colossus by introducing eight campaniles.
these are too small to perform their function well,
look like thin sticks; moreover, they have an arbitr
character, for they are not properly attached to
buildings of which they form a part, and one obta
the impression that they might be knocked off w
advantage to the latter. Of the Tower of Progr
itself one may say that it is an interesting and hig
original example of "skyscraper" design, and it is
many respects a most elegant structure. In a gr
deal of the criticism that can be passed upon it th
is no implication that any other architect could h
had more success than M. Hébrard in the task that
undertook. He has set himself an impossible probl
He has conceived his tower upon such a vast scale t
its lower storeys cover too large an area to be lit
ventilated from the outside; hence he has cut into th
with two enormous barrel vaults open at the ends, w
the result that the base of the tower has not
requisite solidity.

But even if the whole building had been smaller,

e open vaults had been unnecessary, it is question-
le whether the obelisk form can be suitably adopted
a structure that is designed for habitation. In the
se of a monument such as Cleopatra's Needle we
ve one stone resting upon another which is broader
an itself, and the bottom stone, being solid right
rough, is the visible support of the superincumbent
ight; the same is true of our beautiful memorial
lumns with their spreading bases. When, however,
have a many-storeyed building that is punctured by
ndreds of windows and presents a thin and fragile
rface, it seems to lack stability if its upper walls are
held by the transverse stress of invisible beams. But
at is not the only cause, nor the most important,
ich may prevent us from finding pleasure in such a
sign. The constructional argument is often a little
ak, for we are beginning to attain such confidence
the power of concrete and steel that no feat of
gineering will surprise us. No doubt there may be
few flagrant violations of constructional propriety,
ch as a shop-front apparently resting on a sheet of
ss, that will always offend us, but it is probable that
tics will in future direct their attention more and
re to the question of pure design, and will demand
every building not that all its supports should
trude themselves upon our notice, but that a proper
thetic relation should be established between its parts. In considering this point, there is a certain difference between square and round structures that must be taken into account. It will appear that M. Hébrard has treated the top of his circular tower in a manner which is only permissible in a square one, and so he attains a restless telescopic effect. If a rectangular building has an attic storey of diminished area, the two can always be brought into relation with one another, for that part of the façade immediately opposite the attic can be accentuated by a slight projection or by the use of an order; both these methods have been employed with eminent success in St. George's Hall, Liverpool; in Schinkel's museum in Berlin, however, it must be counted a blemish that the central row of columns utterly ignores the attic which is above them. But when there is a round building arranged in tiers like a wedding-cake, even the most skilful architect cannot possibly make it into one coherent composition. A recent design for an immense oval building in New York, after the manner of the Coliseum, perhaps provides an example of the improper use of a receding attic. There is, however, one solution which applies to but a limited number of cases. It has been adopted in the domes of Wren and Soufflot; here the larger drum has an open colonnade behind which we see a wall that is coterminous with the superstructure, while it may be remarked that in each instance there



Elevation.



Section.

A WORLD CENTRE OF COMMUNICATION: THE ARTS BUILDING.

ERNEST M. HÉBRARD, ARCHITECT.

are rectangular projections from the main body of the church, so that by this means the façades are made to take cognisance of the dome.

The sudden diminutions of the Tower of Progress, one at its base and the other at its crown, appear unsatisfactory, because they divide the whole into three parts, which have not been sufficiently connected together. Not only has the base nothing whatsoever to do with the circular colonnade above it, but it does not comprise a unity even when considered by itself. The great arch, for instance, instead of being brought into relation with the rest of the structure by means of an order, completely ignores all the neighbouring features; it strikes one immediately as an element of discord, for while being too small to dominate the façade, it is yet obtrusive enough to cut it into two. What is best in the design is the part between the clock and the crown, which is simple and dignified and might almost stand alone.

All the most beautiful towers of the past, even those attached to buildings, have been carried right down to the ground, and their width has not been increased at their base. This is the natural treatment, for we are dealing with walls here and not with solid blocks of stone such as go to form an obelisk. The essential difference between a habitation and a monument must be taken into account: in the former case we see a thin shell which is lacking in significance unless it expresses to a certain limited extent the shape and disposition of the rooms inside, and if the building is to be a work of art one has a right to assume that an upper storey of diminished area has a logical connection with the plan of the storey below, that it perhaps marks the position of an interior hall which is again reflected upon the outside surface by the accentuation of that part of the façade immediately opposite the hall; but in a monument the units of composition are something substantial, impenetrable, opaque, and so we have far greater freedom to use a pyramidal form. It would seem that M. Hébrard has been led by his admiration of the noble obelisk motive to employ it in an unwarrantable manner.

At first sight one might imagine that when M. Hébrard designed his memorial to Progress the Eiffel Tower was the real source of his inspiration. But this is a fabric of a quite different kind, for it is frankly a steel structure standing firmly on four legs which are a continuation of the main ribs of the tower; in that it has such a satisfactory foundation, it is æsthetically superior to the building we have just criticised.

In the brief space at our disposal it is useless to try to do justice to all the works of architecture in this World's Capital. Most of them are of the type with which the Beaux-Arts School has made us familiar. The fact is that there are so many stately buildings that we become a little weary of them, and long for a foil which would set them off to better advantage. One is reminded of the saying of Goethe that the most illustrious persons when congregated together may form a society which has all the characteristics of a mob. In spite of their individual beauty the Palaces of the Nations may be said to comprise an assembly somewhat lacking in distinction; their common and international purpose would have been better expressed if they had all lined up to the rectangular place. The Art Centre is by far the most successful part of the design; here the dome is given its proper dignity as the most important feature, while the museums and galleries are elegantly disposed around a formal court. The building which is perhaps most open to criticism is the Stadium. Here we have a restless formation of twin towers which would only be tolerable if there were a central feature big enough to dominate them. The curved façade at the ends slides into the straight one in a slovenly manner; the place where the semicircle begins should obviously be accentuated in some way, so that we might be prepared for the sudden bend. Towards the harbour side the amphitheatre has been broken to provide an entrance, with the resu that the whole design has an unfinished appearan such as the Coliseum would have had if there had bee a gap in its oval.

Taking a general view of the buildings of this cit one may say that they provide fresh evidence of th flexibility of the Classic style, which can be adapte to such a great variety of architectural forms.

As to the social significance of the World Capit very little need be said. Ignoring for the moment th insuperable difficulty of language, which would mal the international metropolis like a veritable Tower Babel, let us consider whether, in these days of bool and newspapers, it is necessary to mark out any speci place upon the earth's surface as a centre for the inte change of ideas. No city will ever have the pr eminent position that belonged to Rome in the ancie world. It will soon be possible for there to be uniform standard of culture in all cities and town There is no need for us to go to Paris to becon acquainted with M. Andersen's stimulating book; v can read it with the same advantage in Switzerland, Australia, and in a Sussex village.

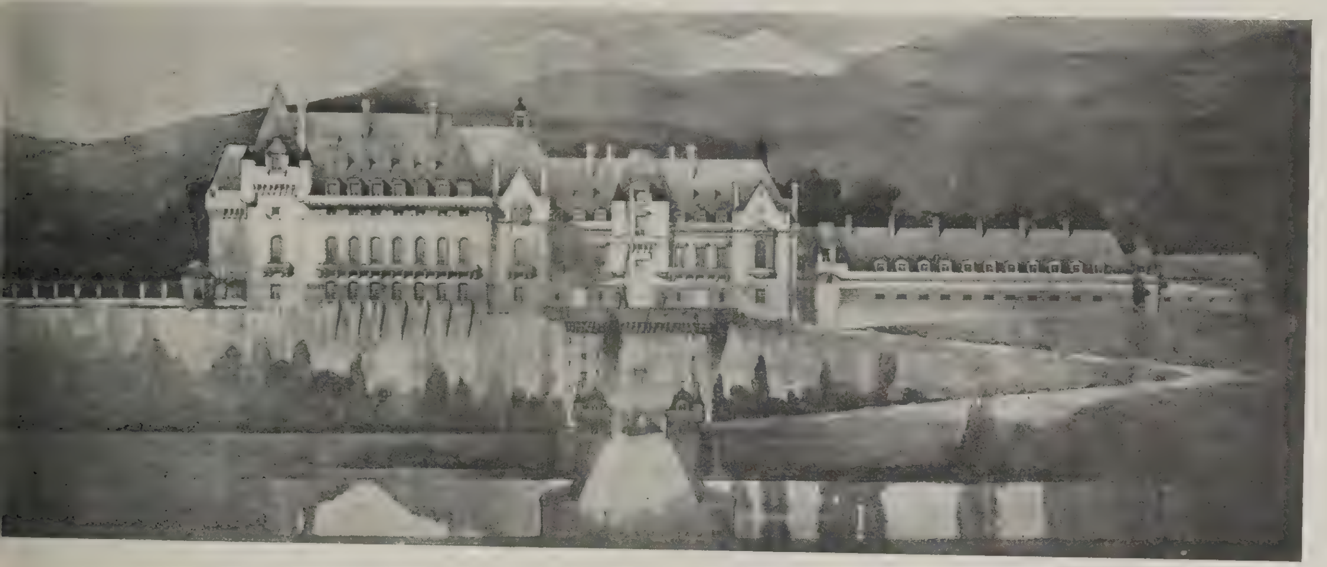
There is another respect, however, in which Andersen seems to ignore the great importance of th written word in our modern civilisation; he lik symbolism in architecture and sculpture. In descri ing his design for "The Fountain of Life" he sa that "it seemed naturally to take the shape of a lar circular basin of which the bottom of blue mosa symbolises a world, with four symbolic figures trac upon it in brightly coloured mosaics, representing th seasons. Four large groups of four figures with childr protected by a central figure represent the varyin shades of sentiment that bind humanity together, an the triumph of love." All this is quite arbitrary. bottom of blue mosaic only symbolises a world becau our author tells us that it does; but it does not expre such a conception by virtue of its own form. Th bottom of blue may be of an elegant shape and i colour may be exquisite, but in so far as it attempts symbolise something that is quite alien to its ow nature, it is altogether outside the category of a If people want to preach peace, love, and brotherhoo they should write pamphlets and get them translat into all languages, and they will explain their vie far more clearly by this means than by trying to mal architecture and sculpture convey a specific mor lesson. Some of the eccentricities that mar the scul ture in this volume are due to the fact that the figur are being strained to express ideas that the plastic ar are quite incompetent to express.

But whatever criticisms may be passed upon it, the is no doubt that M. Andersen's "World Centre of Cor munication" will be counted a landmark in the histo of civic design. We cannot help being struck not on with the originality of the conception, but with i completeness.

In order that nothing may be lacking in their schen our authors have made a minute study of the requir ments of modern museums and galleries and have trie to introduce the newest devices into their building It is obvious that the labour expended upon this volum is quite prodigious. Whether this labour has all bee expended to the best purpose it is almost ungracious ask. The severest critics would doubtless contend th when people are indulging in mere speculation it unnecessary to design a city as if it were going to built next year, and that it would have been preferab to devote more thought to first principles and less the elucidation of small points of detail. On the oth hand it must be remembered that books are not writte nor are pictures painted, for philosophers alone. Th majority of mankind like to have a new idea dresse up to the nines. Everybody is familiar with the typ of student who can never appraise even the proportio of a building until it is decorated, until every mouldin is neatly drawn in. But this desire to suspend judg ıt in the presence of an unfinished product is not ays a mark of mental weakness; many designs look ısible when they are in the rough, but do not bear mination if all their features are clearly delineated. ꞉re is another reason which may account for the ewhat excessive particularity of M. Hébrard's plan. may have been afraid of being called a ꞉ionary"; that is the severest charge that can be ıght against a member of his profession. A painter ermitted to see as many visions as he pleases, but n architect indulges in this pastime he is dubbed practical" and loses caste at once. But if anyone ıclined to say that M. Hébrard's international halls d not be built in the immediate future and would e no conceivable human need if they were built, he always reply that their acoustic properties would xcellent, and their systems of heating would be in ırdance with the latest models, the intended rence being that if so much practicality is displayed he internal arrangements of his buildings, the ꞉ral scheme for which the same author is onsible will also have this quality, and must not be condemned hastily. By such means do artists cope with popular prejudice. But even if they succeed in attracting attention by this device they demean themselves thereby, for they overload their work with what is accidental and temporary. The search for architectural ideas should take the form of light and rapid skirmishing; hundreds of schemes must be brought before us, rather than one scheme elaborated far more than is necessary for its comprehension. Advanced scouts will not perform their functions well if they burden themselves with enough impedimenta to set up a camp. We must be grateful to our authors, however, in that they have had the courage to design an ideal city at all, and that they have designed it in "the grand manner."

This volume cannot fail to be a stimulus to the development of architecture in this country, and it arrives at an appropriate moment, when we are turning from our picturesque Victorian ways in order to gain ampler ideas of what a city should be.

It may be added that the text has been admirably rendered into English.



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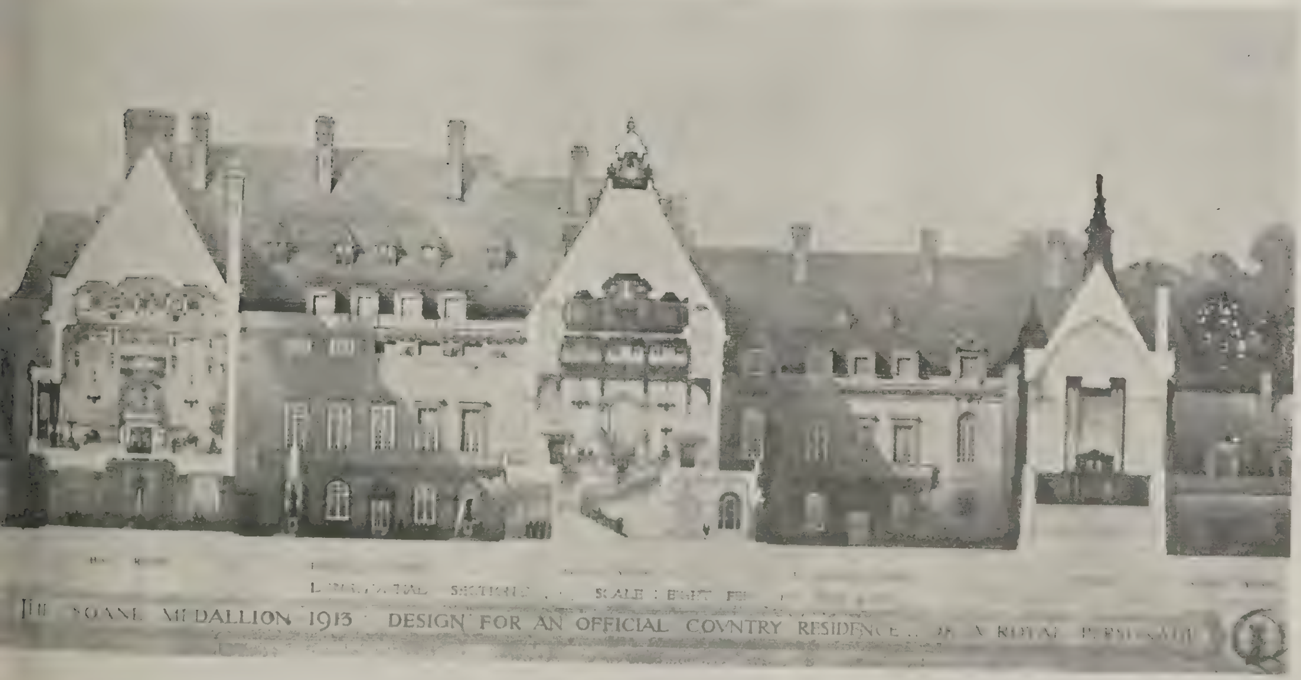


Section.

THE SOANE MEDALLION. A ROYAL PALACE IN THE COUNTRY: DESIGN PLACED FIRST.

BY CYRIL A. FAREY.

STUDENTS' DRAWINGS AT THE ROYAL INSTITUTE OF BRITISH ARCHITECT

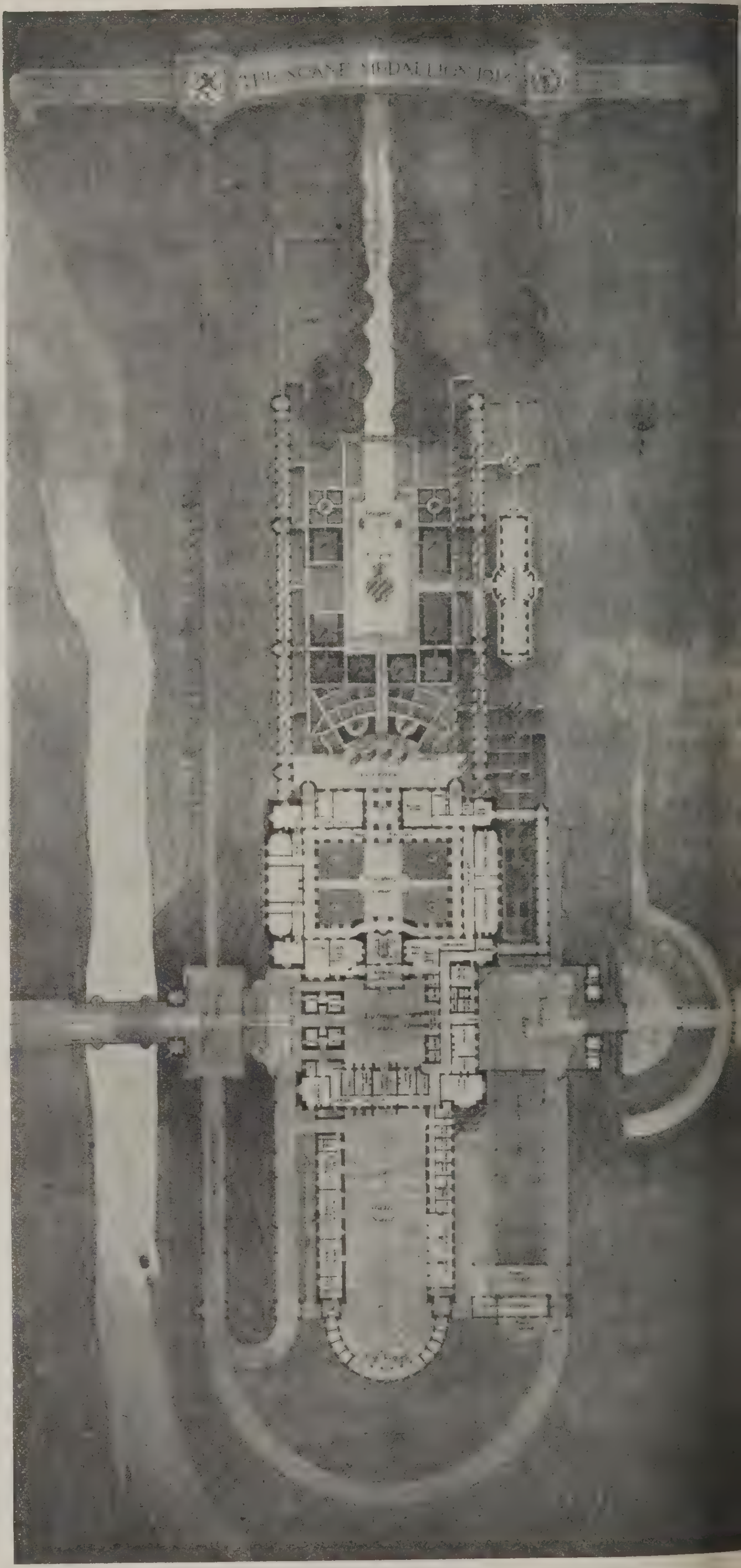
BY A FELLOW OF THE INSTITUTE.

IF we seriously consider the true meaning of architecture, its importance as a national asset, and the highest as well as the utilitarian aspect of its varied manifestations, we naturally feel surprised at the provincial character expressive of the work of the past decade.

It is true that good architecture has been achieved, but its progress, as an elevating factor, has been directed on individual rather than collective tracks, or, to define it more broadly, the leaders of taste have devoted their energies to a dilettante appreciation of historic expression, and have mistaken, in their zeal for prettiness, the more cogent and more difficult interpretations of the present. The undisciplined cohorts obeying the behest of first one Cæsar and then another, have plunged the republic of architecture into the throes of civil war, the lamentable results of which affront the eye throughout the length and breadth of Britain. This scathing comment, despite the convenient excuses of those interested in the present confusion of things architectural, is shared by all who have the welfare of the arts at heart. It is felt alike by the professor and the student. In one direction alone has a slight advance been made, and that towards lovely domestic building, although this moderate achievement is tainted with the stigma of being consciously artificial and forced. These truths need to be digested, however unpalatable they appear. It is some consolation that other countries are experiencing the same difficulties, but their efforts to level up the vernacular have been proceeding for centuries, while our own are spasmodic and occur at lengthy intervals. In draughtsmanship, and more particularly perspective drawing, it is acknowledged even by such masters as the French that our methods are inimitable; we have lately revived the practice of rendering elevational drawings which formerly was the vogue. Imagination in the scheming of all classes of problems is everywhere encouraged; the old insular predilection for dividing a plan into cellular apartments is fast yielding to artistic science. If we examine the causes contributing to this great and far-reaching change of educational policy, we shall find that it is the result of determined effort on the part of the several schools responsible for the upbringing of architects. The new movement is academic in its aspect: it ignores the dictates of fashion and refuses to acknowledge the uncertain and trivial example of those who at present hold public attention. The younger generation are responsible for changing the haphazard system of education which formerly disgraced the architecture of the country. In the latter regard the Liverpool School of Architecture, the Atelier, the Architectural Association, and University College are doing useful and pioneer work; the Royal Academy is very well in its way, but is, very naturally, royally academic.

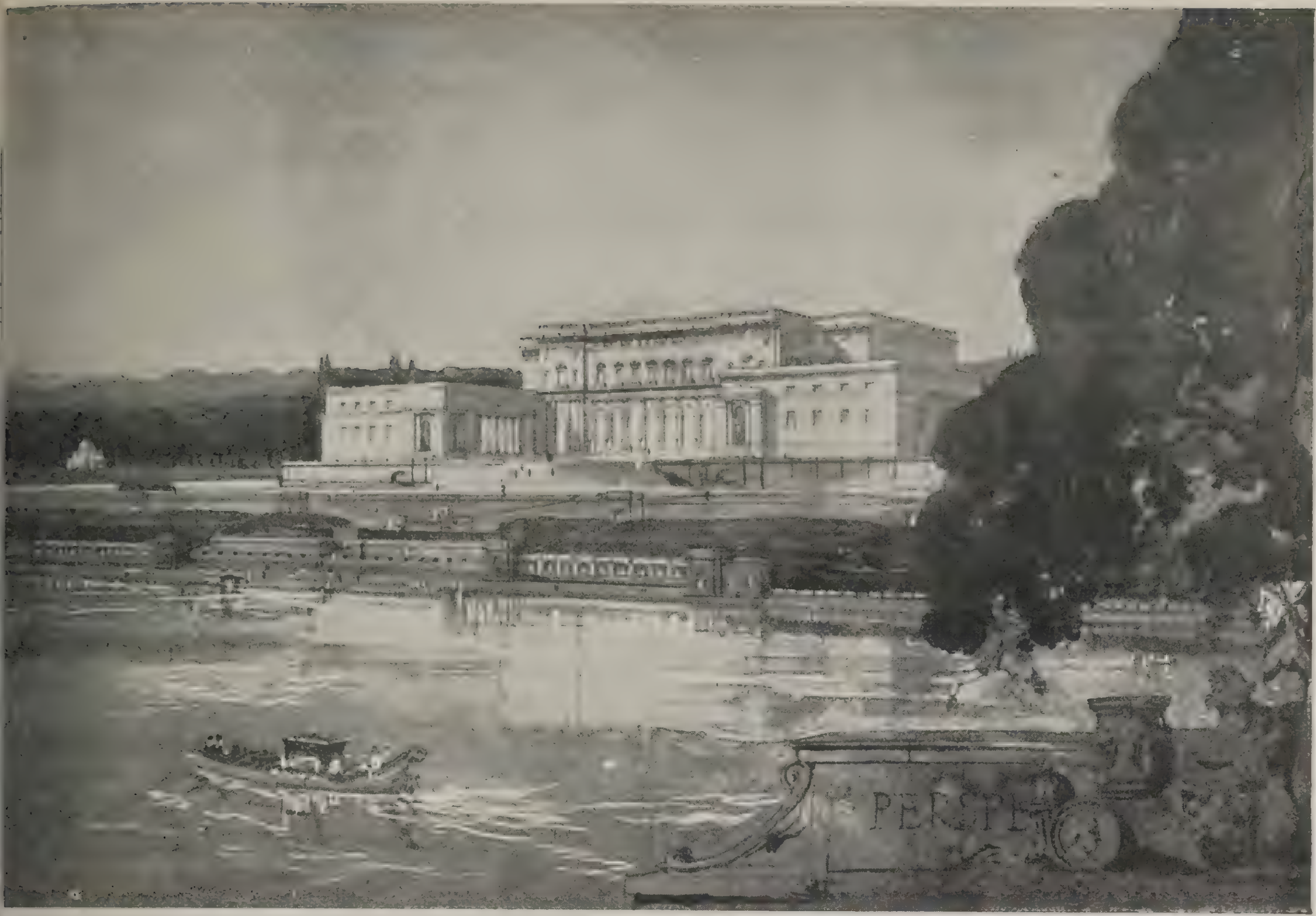
It may be argued that the foregoing lofty and high-handed denunciation of past policy has nothing in common with a review of students' drawings: the standard of excellence attained by the students in the work submitted for this year's exhibition provides the naxus: the sets for the various prizes are fewer in number, but the scholarship is undeniable.

For the historic "Soane" Competition



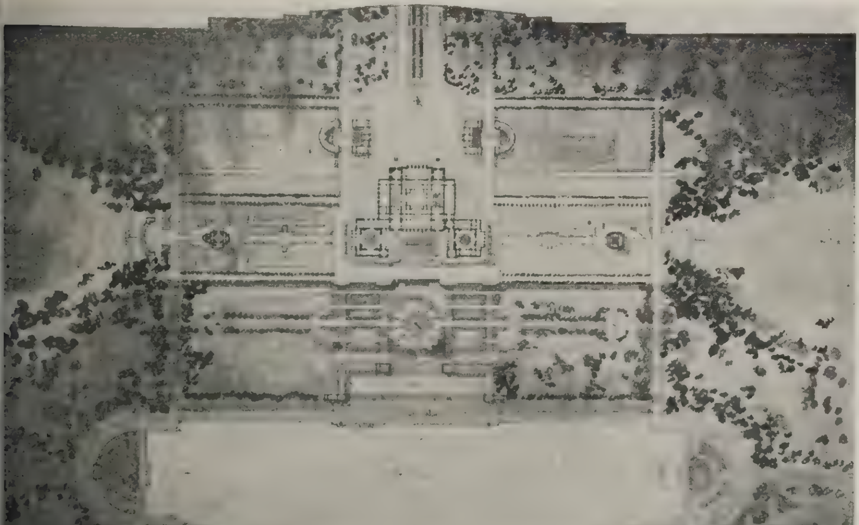
THE SOANE MEDALLION: GENERAL PLAN OF DESIGN PLACED FIRST 8

BY CYRIL A. FAREY.



THE SOANE MEDALLION. A ROYAL PALACE IN THE COUNTRY: PERSPECTIVE OF DESIGN PLACED SECOND. BY H. CHALTON BRADSHAW.

grandiose designs were submitted, the being awarded to Mr. Cyril A. Farey a certificate of mention to Mr. H. ton Bradshaw, who lately won the Prix ome. There is little of anything to se between the merits of either work ; rely for their ultimate effect on a tiful sense of colour and draughts- hip. Mr. Farey's scheme presents a au in a country setting, and that by Bradshaw suggests a palace situate within easy distance of a metropolis. To make the simile clearer, the first design recalls Fontainebleau and the second Versailles. It would not serve any purpose to dwell on the minutiæ of the planning arrangements of either design, but it is noteworthy to record the sympathy between plan and elevation in each instance: in itself a reflex of the academic training of the authors. It can be imagined that the award in this competition presented a difficulty to the assessors, and the equal apportioning of the prize would have been justifiable. Mr. Bradshaw's sheet of details is an essay in itself. The others sets submitted for the "Soane" savour of French extraction ; there is a design by "Halibut" in the style Louis Quatorze which should be studied.

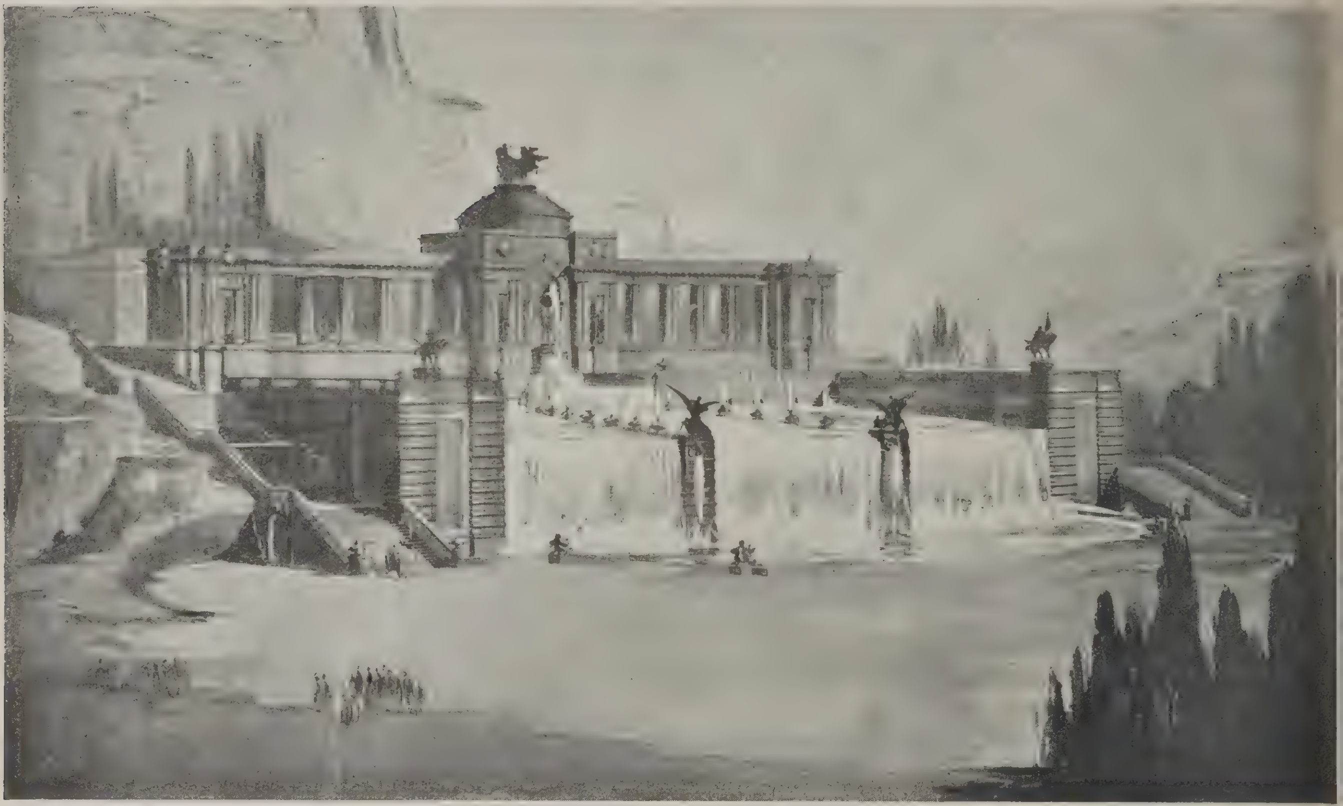


THE SOANE MEDALLION: PLAN OF DESIGN PLACED SECOND. BY H. CHALTON BRADSHAW.

Turning to the Tite Competition, the choice of styles and masters to follow provided ample scope for the students. Mr. Trenwith Wills seems to have caught the spirit of the subject in a very commendable way ; exception, however, must be taken to the sculptural decorations and the composition of the loggia portion. His idea for treating the water portion as a miniature Niagara is without equal among the other competitors. Mr. Shoosmith's design for the subject is appropriate and dignified ; he has been led away in his appreciation for French display, the design of the fountains leaving much to be desired.

The designs submitted by "Joy" and "Merry and Bright" are of that theatrical type bristling with possibilities, but lacking restraint.

The Institute Silver Medal for Measured drawing has been gained by Mr. J. Bennett, of Glasgow, for a delicate set showing the small Classic temple by Bramante. Other competitors sent in studies of Gandon's Customs House, Dublin, and Fountains Abbey, the latter a remarkably fine set of a building which for beauty as well as for archæological reasons deserved measuring. It is a matter for some surprise that this section of the Institute competition does not show very keen rivalry this session. We should like to see more drawings submitted



THE TITE PRIZE. AN IMPORTANT FOUNTAIN IN THE ITALIAN STYLE PERSPECTIVE OF DESIGN PLACED FIRST. BY TRENWITH L. WILLS.

of the type studied in former years by the Liverpool University. The Pugin Studentship, won by Mr. Cecil Young, who sent in a well-considered set of measured drawings and sketches, shows that a spirit is still alive for the study of Gothic. The Arthur Cates Prize has been gained by Mr. J. C. Rogers, and the Grissell by Mr. Phillip D. Bennett for a meritorious dockside warehouse. It is noteworthy that Mr. Trenwith L. Wills, the winner of the Tite prize, and Mr. H. Chalton Bradshaw, who is second for the Soane, are both old students of Liverpool University School of Architecture.

Summing up this brief review of the year's work, we must express the view that the study of monumental design is in the ascendancy on broad and dignified lines. The measured drawings do not attain to the level of those formerly entered for the Institute Prize, while the keen competition for the Pugin is practically non-existent. Lastly, what has become of the Owen Jones contest?

(To be continued.)

BOOK NOTICES.

Smithsonian Institution's Report.

That excellent institution "for the increase and diffusion of knowledge among men," the Smithsonian Institution, of Washington, issues annually a substantial volume recording its activities, and presenting, in a general appendix, some thirty or forty articles selected from a twelvemonth's noteworthy contributions to knowledge made by investigators of various nationalities and relating to various departments of science. Astronomy, mathematical research, physics, chemistry, mechanics, geology, ethnology, travel, are all represented in the volume under notice, from which, however, we miss the purely architectural interest which experience of former volumes in the series had led us to expect. There is, however, in the "report of the secretary," Mr. Charles D. Walcott, an interesting reference to the George Washington Memorial Building. A Bill has been passed by the United States Senate granting to the George Washington Memorial Association permission to erect on the Government reservation known as Armory Square, a memorial building to cost not less than two million dollars, where large conventions or in which large public functions can be held, or where the permanent headquarters and records of national organisations can be administered. By the provisions of the Bill the control and administration of the building would be vested in the Board of Regents of the Smithsonian Institution, and the association is to provide a permanent endowment fund of not less than five hundred thousand dollars for the maintenance of the building.

Annual Report of the Board of Regents of the Smithsonian Institution. Showing the Operations, Expenditure, and Condition of the Institution for the year ending June 30, 1912. Washington: Government Printing Office, 1913.

Architectural and Building Construction Plates.

Constructional drawings, showing all the devices in common use for the putting together of building materials with economy, strength, and comeliness, abound in the text-books, but the small scale to which they are necessarily reduced is too often accentuated by overloading them with details, many of which are superfluous for architects, who do not want to know how to do the thing, but how it looks when it is done. This requirement is met in the series of thirty plates prepared by Mr. W. R. Jaggard, A.R.I.B.A., as a basis for an elementary course of lectures on building construction. They show exactly what a young architect wants to know about brick work, timber for trenches, masonry, carpentry and joinery, roofing, plumbing, and
steelwork, and they show it with all
skill of an accomplished draughtsman
is familiar in actual practice with
methods he illustrates, the examp
having been carefully chosen from w
actually carried out under the directio
the author, with whom we have no diffic
in agreeing that in some cases the pl
will form a ready source of reference,
for architect and builder, upon items
construction not easily found in text-bo
In this sense the plates that will ren
most valuable service are those relatin
the more complicated features of bond
in brickwork—the bonding at the junc
of intersecting walls, and of various fo
of arches, being very clearly shown-
chimney breasts and flues, to firepl
hearths, to the application of damp-p
courses and ventilating openings,
masonry joints and walling, and to vari
operations in carpentry and joinery.
the fundamental details of plumbing
shown, and by no means obscurely, o
single plate, and standard steel and i
sections occupy a similar space. S
compression is, of course, impossible w
for example, brickwork and carpentry
joinery, the former subject filling n
plates, the latter about a dozen. Althou
the plates are to the fullest extent possi
self-explanatory, we nevertheless vent
to suggest that the educational service
Jaggard has rendered in publishing th
would be increased if he could see his
to the issue of a supplementary text-bo
which, as a detailed description of
plates, would necessarily assume the fo
of a treatise on elementary building c
struction from the architect's point of vi
and would therefore possess considera
value in itself.

"Architectural and Building Construction Plat
Part I. Thirty Drawings covering an Elemen
Course for Architectural and Building Students.
Walter R. Jaggard, Architect, A.R.I.B.A. (The C
bridge Technical Series; General Editor, P. Abb
B.A.). Portfolio, 19½ ins. by 13¾ ins., 6s. net.; o
six parts, 1s. 3d. net each. Cambridge: At
University Press.

HE NATIONAL FEDERATION.

Annual General Meeting.

:he annual general meeting of the ional Federation of Building Trades ployers of Great Britain and Ireland held in the Throne Room at the Hol- n Restaurant on Wednesday last. Mr. Higgs, President, was in the chair, and e was a large attendance of members.

he annual report and the auditors' ort and balance-sheet were adopted out discussion.

vote of thanks was passed to Mr. pherd for his work on the Parliamen- Council, on the motion of Mr. S. thurst (Oldham), seconded by Mr. ds.

R.I.B.A. Forms of Contract.

ie meeting proceeded to deal with re- mendations from the previous day's ncil meeting. In regard to the forms ontract and sub-contract, the Council mmended that the matter should be ier deferred until the sub-committee in a position to make a complete re- Certain further suggestions were to and were receiving attention.

The Revenue Bill, 1910.

was reported that a special committee been reappointed to watch this Bill it is reintroduced this session.

N.A.O.P. Agreement.

e Secretary reported that the).P. had given formal notice for the nt rules of the national agreement to considered with a view to their revi- as they wished to add a "contracting- clause to enable any district which ot like the agreement to retire from t their meeting the previous day the cil had passed a resolution opposing otice, and their recommendation was mously endorsed.

Demarcation.

Council approved the suggestion of ference on the formation of a stand- emarcation committee, and recom- ed that Messrs. Easten and Storrs be nted to represent the Federation if onference be held.

Labour Troubles.

to what action should be taken members of operative unions which ntered into working agreements with yers' associations resort to strikes in- of first referring the dispute to con- on."

egard to this item on the agenda the ary explained that the Council had evious day passed the following reso- unanimously: "That working rule nents with operative associations are ess unless backed up by sufficient inary power to secure their observ- y both parties, and the Federation s its support to any of its branches find it necessary to take action to the same.

F. G. Rice (London) said that they et the workmen know that while the s were willing to give them equitable nd regulations, the men must abide se rules in the same way as the s. If the men's leaders were unable re this, the masters had no choice deal with the men individually. id not wish in any way to smash the but the workmen could not be l to pick out such rules as they liked w, after accepting an agreeement, disregard the others. The penalty that the London masters proposed was the only means of making the individual workman realise his responsibility as a unit.

MR. W. THOMAS, OF CARDIFF.
(*President of the National Federation. 1914.*)

Mr. W. J. Renshaw (London), seconding, said that the London Master Builders' Association had done everything possible to meet the men's demands and the present action was a last resource. They felt that builders in the provinces were likely to be harassed in exactly the same manner as the London builders, and they therefore thought they were fighting for the benefit of provincial members as well as of themselves.

Mr. E. J. Brown (London) said the men had struck before referring matters to the Conciliation Board, and it was a distinct rule that there should be no stoppage of work until the Conciliation Board had discussed the matter.

Several other speakers supported the resolution, which was unanimously carried.

The Secretary said the following further resolution had been passed by the Council, who recommended its adoption by the meeting: "This Federation further considers that, unless the Executive Council of the unions can assure employers' associations with whom they enter into agreements that they are backed up by sufficient disciplinary power, and will use such to secure their observance, it would be better to cancel all agreements."

The Chairman said the Secretary would give instructions to the branches that no man going from London to the provinces should be employed; and he thought the resolution would morally bind the provincial employers not to come to London during the dispute to do work.

The resolution was carried unanimously.

The New President.

The appointment of officers of the Federation for the ensuing year was made as follows: President, Mr. W. Thomas (Cardiff); senior vice-president, Mr. A. W. Sinclair (Scarborough); junior vice-president, Mr. W. F. Wallis (Maidstone); treasurer, Mr. J. Storrs, J.P. (Stalybridge); hon. auditors, H. Willcock (Wolverhampton) and Stephen Easten (Newcastle).

The new President assumed the chain of office and took the chair. In thanking the members for his election, he referred to the injustice to the building and engineering trades inflicted by the unemployment part of the National Insurance Act not applying to all trades. With regard to contracts, he thought there should be two forms. The methods of the North were so different from those adapted in London that a second contract form should be brought into use for those builders in the North who sublet contracts direct. In conclusion, the President moved, and Mr. E. J. Brown seconded, a vote of thanks to the retiring president, Mr. F. Higgs, whose name was added to the list of hon. vice-presidents.

It was decided to accept an invitation to hold the next half-yearly meeting at Cardiff.

Extraordinary Traffic.

The Secretary read correspondence on the subject of "Extraordinary Traffic" from the Midland Centre, and Mr. Moffat (Birmingham) mentioned that some of the local road authorities were charging the builder up to 8 per cent. of the gross contract price on the pretence of damage to the roads from extra traffic. The Midland centre considered the charge for extra traffic should be paid by the building owners. Some form should be drawn up for general use throughout the country relieving the contractor of the responsibility.

The matter was referred to the Administrative Committee.

The Secretary reported the receipt of a resolution from Birmingham asking the Federation to take action in the matter of the return of priced quantities with tenders.

Mr. Elvin, who supported the application, mentioned that the War Office now accepted tenders without priced quantities for amounts not over £2,000, and he thought the Federation ought to do something to induce the railway companies to fall in with this practice.

This matter was also referred to the Administrative Committee.

SPECIAL LEGAL REPORTS.

Liability of Contractor to Sub-contractor: Architect's Certificate: Important Judgment.

E. Pollard and Co., Ltd., v. Kirk and Kirk.

January 17. King's Bench Division. Before Mr. Justice Ridley.

This case was an action by Messrs. E. Pollard and Co., Ltd., of Clerkenwell Road, shop fitters, against Messrs. Kirk and Kirk, builders and contractors, of Exeter Street, Westminster, to recover the sum of £100 5s., being the balance of amount certified for by an architect for work done at premises in the Commercial Road. The original amount of the debt was £160 5s., but the defendants had paid £60. They had now paid the amount of the claim into Court, but set up various defences.

Mr. Talbot appeared for the plaintiffs and Mr. McCurdy for the defendants.

The defendants entered into a contract with the building owner to rebuild the premises at Commercial Road and they entered into a sub-contract with the plaintiffs to do the fitting up of the shop. Under the agreement which was first submitted to the plaintiffs there was a term as follows: "Payment to you (plaintiffs) upon the certificate of the architect, such certificate to be embodied in one to ourselves." Plaintiffs alleged that they rejected the condition and refused to be bound by it. They said they had done the work, had obtained the architect's certificate, and they were therefore entitled to payment.

Mr. McCurdy argued that the architect never had the remotest authority to call upon the defendants for more than £60. His defence was that the defendants had never had the certificates which were a condition precedent to the defendants' liability to pay, until after the writ was issued in this action. His point was that the certificate of the architect produced to them by the plaintiffs was not good because it was not included in another certificate to them.

His Lordship: That is no defence at all. There is no answer to the case whatever. The plaintiffs have got the architect's certificate which entitles them to payment.

Mr. McCurdy argued that the work was not done for defendants, but for another party, and that his clients were, so to speak, only a conduit pipe through which the money had to go. He contended that payment was to be made on an architect's certificate and, further, that they were to have a certificate including that certificate at the same time.

His Lordship: There is no hardship here on you except what you have made for yourselves. You get the money back from the building owners. Judgment for plaintiffs for the amount claimed, £100 5s., with costs.

His lordship ordered the money paid into Court by the defendants to be paid out to plaintiffs.

January 24. King's Bench Division. Before Mr. Justice Ridley.

His Lordship stated that he had caused this case, which he had tried and decided on January 17, to be again put into the list for hearing and the parties informed, as he had vested his decision on a document which he assumed was the contract between the parties, but, thinking over the matter, he was not so sure as to the contract, and therefore he had decided to rehear the case.

Mr. Talbot appeared for the plaintiffs and Mr. McCurdy for the defendants.

Mr. Talbot reminded his lordship that the action was brought by the plaintiffs, shop fitters, of Clerkenwell Road, to recover from the defendants, builders and contractors, of Exeter Street, Westminster, the sum of £100 5s., being the amount certified for by an architect for work done at premises in the Commercial Road. The amount of the debt owing to plaintiffs was £160 5s., but they had been paid £60, and as the certificate of the architect for the balance due to them, viz., £60, had not been given till after action brought, all that the plaintiffs could now recover was £40, being the balance of the £100 for which the architect had given his certificate at the date of action brought. Defendants, however, had paid into court the sum of £100.

Evidence had been called for the plaintiffs that they had received the architect's certificate for £100 out of the £160 and that they had been paid £60 on account.

Mr. McCurdy, for the defendants, said his clients were building contractors under a building contract for a considerable sum of money, and the plaintiffs carried out a sub-contract. The point upon which this case turned was that there was no authority, express or implied, contained in the original contract which would enable the architect to increase the provisional sum named in the contract—£60—for this shop front by one penny piece or to make his building owner responsible to anybody.

Mr. Talbot: My contract is between my clients, the plaintiffs, and the defendants, and therefore I don't count any contract between the building owner and the defendants.

Mr. McCurdy said, notwithstanding this the defendants were quite ready to accept responsibility provided that the amount was included in one of their (the defendants') certificates, so that they could get the money back from the building owner. That, he submitted, was fair and reasonable. If a builder had to pay on the certificate of the architect to the sub-contract, contractors would be in a peculiar position in regard to a large number of items.

His Lordship: I think there is no difference at all as to the certificate. Defendants write to plaintiffs and make a contract under which they agree to pay the plaintiffs, and they add that they will pay when they get the certificate of the architect. As to the £100, you have got that certificate and therefore I think there is no answer to this claim.

Mr. McCurdy argued that the certificate the defendants were entitled to was one that was binding on the building owner. They would not get that certificate, but only one given the plaintiffs.

His Lordship could not see why the defendants should have any other certificate. Defendants told plaintiffs to go on with the work and they had got a certificate, and they must pay. He was afraid that he had decided the case rightly on the last occasion. He thought the defendants' point hopelessly failed. Judgment for plaintiffs for £40 and costs on the High Court scale, to be paid out of the money paid into Court by the defendants. On the first certificate plaintiffs were only entitled to £100 and as they had had £60, they now got judgment for the remaining £40 and costs.

Builder and Building Site: An Appeal.

Porter v. Tottenham Urban District Council.

January 21. King's Bench Division. Before Justices Ridley and Bankes.

This was a motion by the defendants to set aside a judgment of the Official Referee (Mr. Muir Mackenzie).

Before the Official Referee, the plaintiff, Mr. Porter, a Tottenham builder, claimed damages for failure to give him possession of a builder's site. Plaintiff was invited to tender for the erection of an infants' school at Keslin Road on a site 366 ft. away. Plaintiffs' tender of £11,043 was accepted. Plaintiff said in order to get to the site he had to make a sleeper road. The work went on till March 5 when trouble arose between Mr. Rowley, who claimed the whole of the ground on which the sleepers were laid as private land, and the defendants. Plaintiff took up the sleepers and gave notice to the Council, and they made no objection. On March 12 plaintiff said he had done all he could to fulfil his contract. On March 30 the plaintiff recommenced work and duly completed his contract. Plaintiff said it was part of the obligation of the Council that he should have access to the site and he accordingly claimed damages.

Defendants denied liability. They said they gave the plaintiff no warranty except that he had a right of access from the Keston Road. The plaintiff gave the undertaking he did to Rowley without the sanction of the Council.

The Official Referee decided in favour plaintiff and awarded him £560.

From this decision the Council appeal and the Court in a reserved judgm allowed the appeal of the Council, holdi that the building owner did not ensure t prompt possession of the site should given. They were of opinion that the cision of the Official Referee was erroneo and should be reversed.

Judgment was entered for the def dants.

Builders and Pile-Driving: Reasonal Hours.

January 23. Chancery Division. Before Mr. Just Warrington.

De Keyser's Hotel v. Minter and Sons and Others.

This was a motion in the action of Keyser's Hotel v. Minter and Sons a others to restrain the defendants, build and contractors, from using pile-drivi machines to drive piles during cert hours of the night and early morning.

Mr. A. C. Clausen, K.C. appeared plaintiffs; Mr. H. Terrell, K.C., Messrs. Spicer Brothers, the owners of site on which the building is being erecte and Mr. G. R. Blanco White for the def dants, Minter and Sons.

Mr. Blanco White, in opposing the app cation for an injunction, said that builders in their affidavit said there was quieter way of doing the work. Beyond noise of the hammer striking the steel tu there was really no noise. He pointed that they were under a penalty to compl the contract before a certain date.

His Lordship, in giving judgment, s that one knew pretty well what the no caused by pile-driving must be. On night of January 15 the pile-driving w on all through the night, with the res that, apparently, nobody in the hotel, at any rate, nobody on that side of it wh was nearest the operations, could get sleep. On the morning of January 16 ex parte injunction was granted restraini the defendants from using their pi driving machines between 10 p.m. a 6.30 a.m. A continuance of that order now applied for. The defence raised that the defendants' operations were bui ing operations conducted in the City London and that no legal nuisance was casioned by such operations provided t they were conducted in a reasonable a proper manner. Anyone who lived in City of London had to put up with tem rary annoyances which might under ot circumstances be a legal nuisance, really to have this pile-driving conduc throughout the night on the land imme ately adjoining the plaintiffs' hotel peared to be beyond the liberty even which one in the City of London mi have to submit. It was said that Mess Spicer were not responsible. Well, t were the persons in the occupation of premises. It was said that the build were not responsible because they had c tracted with somebody else. As at pres advised, his Lordship thought he must tend the injunction to the builders and the occupier of the premises. He gran an injunction restraining the builders fr causing a nuisance by noise to the pl tiffs or the customers of De Keyser's H by conducting pile-driving operations the pile-driving machine at present us or any other noisy machine in or about excavation for the foundation between hours of 10.30 p.m. and 6.30 a.m. would say nothing in his judgment ab carrying on building operations generall

tractors' Successful Appeal under the Workmen's Compensation Act.

rge Lacey v. John Mowlem and Co.

ary 26. Court of Appeal. Before the Master of
Rolls, Sir S. Evans, and Mr. Justice Eve.

his was an appeal of the respondents,
srs. John Mowlem and Co., builders
contractors, from the award of the
ge sitting at the Portsmouth County
rt as the arbitrator under the provisions
he Workmen's Compensation Acts in
ur of the applicant, who had been in-
d while engaged upon the appellants'
: in connection with some powder
azines.

r. H. Du Parcq appeared in support of
appeal and Mr. Horace Fenton for the
:man.

r. Du Parcq said that the applicant in
course of his employment slipped on
huttering of a trench and hurt his arm.
received compensation for three
ths and returned to work, and he
ed that when slinging a bag of tools
s shoulder he hurt his arm again. The
ned counsel argued that the applicant
not given the proper statutory notice
e accident to his employers and that
earned judge had misdirected himself.

:. Fenton having addressed the Court
ipport of the award of the County
t judge on behalf of the workman,
eir lordships allowed the appeal, hold-
that the employers had been preju-
l by the failure of the workman to
notice of the accident within a reason-
time.

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ing Contract : Change of Site : Appeal from the Official Referee.

h v. the Bournemouth Corporation.

y 28. King's Bench Division. Before Justices
ey and Bankes.

is was a motion by the plaintiff to set
a judgment of the Official Referee,
Muir Mackenzie. (See issue of No-
er 12, p. 54, and November 26, p.

e action before the Official Referee
rought by Mr. Frank Gough, on be-
of his brother, Mr. Henry Gough, a
er and contractor, formerly trading
and M. Patrick, against the Corpora-
in respect of certain work done by
tiff in the erection of elementary
ls for the defendants, and also in
d to the school site. Plaintiff claimed
the defendants the sum of £2,859 in
ct of work done in connection with the
l, and the expense he had been put to
gard to a change of site. The Official
ver found that the Corporation were
l by no other contract than the sealed
act, therefore he found that the Cor-
on had not committed any breach of
bligation regarding the question of
As to the balance due under the con-
there was a stipulation that no money
o be considered to be due until the
eer had given his final certificate.
efore plaintiff failed on that point
From these findings the plaintiff now
led.

Whateley appeared for the appellant
Mr. Pollock, K.C., M.P., and Mr.
for the Corporation.

Whateley pointed out that the appel-
ecured the contract for the erection
elementary school at Winton, near
emouth. The plaintiff claimed
st the Corporation for damages
d to have been sustained because, in
vention of the agreement, the Cor-
on altered the site of the school from
soil to soft muddy soil, and for
, the balance of account for extra
done. The Referee found against the plaintiff. Counsel argued that the Referee had admitted evidence which he was not entitled to hear and wrongfully held that the contract was rectified with the assent and acquiescence of the contractor.

The Court, without calling upon Mr. Pollock, dismissed the appeal, with costs.

Mr. Justice Ridley said, in his opinion, there was power to rectify such an agreement as this. Looking at all the facts and circumstances of the case, it was one in which there should be power to rectify. This seemed to him a case in which rectification ought to be made, and therefore the Court arrived at the same decision as the Official Referee, though for different reasons. The decision would be affirmed.

Mr. Justice Bankes agreed.

The Crane Accident in Holborn.

Matthews v. The General Building Co.

January 28. King's Bench Division. Before Mr. Justice Darling and a Special Jury.

This was an action by Mr. J. Matthews against the General Building Co. to recover damages in respect of the death of his son, which he alleged was caused by negligence on the part of the defendants, who employed him.

It appeared that the defendants were engaged during last year in the erection of a new building in Holborn opposite the First Avenue Hotel and used a Scotch crane on a high platform. Anchor chains were used on the crane and plaintiff alleged that on April 24 last one of these chains broke, when his son, Henry Matthews, who was acting as signalman, was thrown off the platform and, falling 100 ft., was killed. Plaintiff said the accident was due to the defendants' negligence.

Defendants denied negligence and said the chains were tested and that they took every reasonable care to prevent such a regrettable occurrence.

The jury, after considering for a prolonged period, were unable to agree on a verdict and were discharged.

OBITUARY.

Colonel W. L. Vernon.

Colonel Walter Liberty Vernon, formerly Government Architect of New South Wales, died at Sydney last Saturday week at the age of sixty-seven. Colonel Vernon resided in England for some time, and practised as an architect at Hastings. Later he went to Australia for his health, and was appointed State Architect in 1890, in which capacity he had charge of many important undertakings, including the National Art Gallery, Sydney, the Fisher and Mitchell Libraries, the Engineering and Medical Schools of the University and the Registrar-General's office. He retired in 1911. He took a practical interest in the military forces of the Commonwealth, and was a Colonel of the 2nd (Northern) Australian Light Horse Brigade.

Mr. William Smith.

Mr. William Smith, who for many years was architect to the Islington Board of Guardians, died last week. On behalf of the Board he carried out the new relief station and dispensary at a cost of £4,000, and was identified with important alterations and extensions to the workhouse in St. John's Road. His other works included the Infirmary at Highgate, which cost £300,000; Messrs. Spicer Brothers' warehouse in Tudor Street, Blackfriars, costing £20,000; and many minor undertakings connected with churches, schools, and private houses. He resigned his official position in 1908.

THE MODERN ARCHITECTURAL JOURNAL.

Modern journalism, reflecting the life of our times, is a most complex activity wherein speed and accuracy have to go hand in hand, the latest news-matter side by side with a critical survey of the world's work and thought. It is a giant development from what a former generation was familiar with, and every section of the Press—including that devoted to architecture and building—is influenced by the new requirements. The great essential is to keep abreast of the times, and, where illustrations are concerned, to adopt the most modern processes of reproduction. People nowadays must have information presented in the most succinct form, and everything must be done in an attractive manner, for the pressure of work does not allow the reader time to search for hidden merits—he cannot afford to read columns of matter in order to ascertain the few sentences that embody the essential information which is of use to him.

It was with a full recognition of these conditions that this Journal was established, and the success which it instantly achieved was ample testimony to the right judgment which directed its conduct. Those who have been responsible for its direction have ever striven to keep the Journal well abreast of what is taking place in the world of architecture and building, and its development has been throughout a progressive one, as may be seen at a glance by comparing the issues of earlier years with those published to-day.

At the present time, one may fairly claim that it is the most widely read and the best illustrated of all the journals devoted to the interests of the architectural profession and the building industry.

Taking first the interests of the architect, it will be admitted that these are most completely represented, alike in letterpress and illustrations. The services of acknowledged authorities have been secured, and the articles consequently are well informed. The leaders review the topics of the week in an incisive manner, while the main articles deal with special subjects of general interest to architects. Competitions receive their regular share of attention, reports of important cases in the Law Courts are specially supplied, reports of papers read before the various societies are given in a summarised form embodying all essential information, and the news matter is similarly condensed. The architect thus has before him a conspectus of current thought in the profession and of the week's happenings. But the most striking feature of the Journal is, perhaps, its plates. These are quite unique. It has long been a custom among architects to file or store, according to their own particular system, those illustrations which seem likely to be useful to them for future reference. The plates published every week in the Journal are particularly serviceable in this respect. They are not a miscellaneous collection, but form part of regular series. Thus, there is a series devoted to Current Architecture, another to Modern Domestic Architecture, another to Modern Shop Fronts, and so on; all published as single plates and numbered, so that, with the special index, which is issued at the end of every volume, they can be kept in a form ready for easy reference. To facilitate this, a special portfolio has been prepared to take the plates. The architect thus has at hand a growing library of illustrations, uniform in size and character, which he can make constant use of. In every issue of the Journal there is, in addition, a double-page plate which, at the present time, is devoted to one of two subjects—either a working drawing by a well-known architect, or a measured drawing of some fine example of Georgian interior decoration.

With all these features, it is not surprising that the Journal should find such wide support among architects, more especially as its price is only half that of its contemporaries.

The building industry also finds full representation in its pages, illustrations and articles of all important new works of construction, new materials, etc., being regularly given, while the list of "Contracts Open" which is published in every issue is the most complete to be found in any of the architectural and building journals.

The Journal thus is in the forefront, keenly alive to all that is taking place, and enjoying the reputation of being the most attractive and useful journal of its kind published.

INSTITUTE OF BUILDERS' DINNER.

The annual dinner of the Institute of Builders was held on Tuesday, January 27, in the Whitehall Rooms, Hotel Metropole, when the chair was occupied by the President, Mr. Ernest J. Brown. Among those present were Messrs. A. W. S. Cross, Frank May, W. Edward Woolley, William Shepherd, Percy B. Tubbs, T. J. Carless, J. Storrs, W. Thomas, F. L. Dove, F. Higgs, E. P. Wells, James Carmichael, J. S. Gibson, George Corderoy, Frederick Shingleton, Leo Horner, Walter Lawrence, E. J. Strange, G. F. Rice, W. F. Wallis, G. Bird Godson, H. McLaughlin, H. W. Wills, Thomas Costigan (secretary), and many others.

Mr. James Storrs, in an amusing speech, proposed the toast of "The Architects and Surveyors."

Mr. A. W. S. Cross, F.R.I.B.A., replying for the architects, explained that his presence there was due to the inability of Mr. Reginald Blomfield to attend. There were, he continued, one or two things that remained to be settled between the Institute of Builders and the R.I.B.A., among them the question of sub-contracts. The R.I.B.A. was quite willing to meet any committee that the builders cared to appoint. In conclusion, he hoped that the old quarrel between capital and labour might be brought to a conclusion on terms satisfactory to both sides.

Mr. W. Edward Woolley, F.S.I. (President of the Surveyors' Institution), replied for the surveyors.

Mr. James Carmichael, proposing the toast of "The Institute of Builders and its President," said he did so with very great pleasure, it having been his privilege to propose the initiation of Mr. Brown as a member of the Institute. Having described the various and special functions of the Institute of Builders, the L.M.B.A., and the National Federation, Mr. Carmichael turned to the President, who, he said, was not only a tremendous worker, but a man of commanding presence with a clear head and a keen tongue. He had not only occupied the chair during his year of office: he had filled it both physically and intellectually.

The President, in his reply, said Mr. Carmichael and he were opponents of long standing in the good old game of golf, but he acknowledged that the last speaker had the advantage of him. He felt that it was all square at the seventeenth, but at the eighteenth Mr. Carmichael had laid him a dead stimie. In describing the activities of the Institute of Builders, which often had concern with questions of a purely abstract character, the President made an interesting allusion to apprenticeship, which nowadays was almost a dead letter. The unions, so far from encouraging apprenticeship, said there should be only so many apprentices to so many full-blown workmen, evidently with the object of keeping the trades to themselves. The Institute of Builders offered prizes to be competed for, but they often had to be withheld because the papers did not come up to a sufficiently high standard. This condition of things seemed deplorable. Referring to the dispute in the building trade, the President said that the architects, in standing by the associated builders in the fight they were waging, could help them materially and at the same time render excellent service to the building trade.

Mr. F. G. Rice, in proposing the toast of "The National Federation and the London Master Builders' Association," related how labour troubles had agitated London so far back as five hundred years ago. With respect to the present dispute, he suggested that conditions of labour, equitable alike to masters and men, be settled by agreement and faithfully observed by both sides. Liberty was a good thing, but, paradoxical as it might seem, there was no greater tyrant than liberty uncontrolled.

Mr. Frederick Higgs, replying for the National Federation, the presidency of which he has just vacated, congratulated the L.M.B.A. on taking up the cause of freedom of contract and the observance of agreements. His Federation, he believed, would pass a resolution at their annual meeting supporting London in their effort to maintain agreements solemnly undertaken. (As will be seen from the report of the Federation meeting published elsewhere in this issue, this resolution was adopted.) Mr. Higgs concluded his speech with a review of the work of the Federation during the past year.

Mr. Walter Lawrence, jun., replying for the L.M.B.A., said the present dispute in the London building trade had arisen because the union men had violated and broken agreements on every possible occasion so far as working with non-unionists was concerned. The conciliation rule provided that, no matter what the dispute, it should be referred to the Conciliation Board before a stoppage of work took place. There was nothing unreasonable in that. The rule was signed, but before it had been working very long stoppages were happening everywhere. The masters had endured it since last May—long enough to exhaust their patience—and after twenty stoppages they had decided to deal seriously with the matter. On December 23 they held a conference, to which each union sent two representatives, who, however, had no suggestions to make. The Conciliation rules provided for the submission of disputes to an independent arbitrator of the Board of Trade. Sir Ernest Hatch had previously dealt with one dispute and given the opinion that the men had violated the agreement. The men ignored the arbitrator's decision and continued the dispute until the date of the conference. The masters laid it down that the men should return to work after the Christmas holidays and provide a substantial monetary guarantee. It was suggested that a sum of £500 or £1,000
deposited in a trust fund, disputes su
mitted to an umpire and damages award
to the side which was entitled to the
They gave the unions until January 5
come to a decision. The union said th
was no time for a ballot, so the mast
asked whether the Executive Commit
was in sympathy with the proposal. Th
ignored this inquiry and simply wrote
January 5 to say that no answer could
given for a month or six weeks, which w
obviously a ruse to gain time. T
L.M.B.A. was strong enough not to all
itself to be played with in that mann
and they declared that the agreement w
at an end forthwith. It would be intere
ing, he continued, to see how many m
signed the new agreement that had be
issued. He believed the number wou
stagger the unions. One firm alone h
received 250 signatures from th
employees. A point made against
L.M.B.A. was that they were trying
smash the unions. That was prepostero
They themselves were a union. They h
no objection to trade unionism when c
ducted on proper lines.

Mr. F. W. Wallis proposed the fi
toast of "Our Guests."

Mr. H. McLaughlin (Hon. Sec. Dub
Master Builders' Association), in reply,
scribed the recent strike in Dublin, whi
he said, was not confined to builders;
affected a great variety of industries. T
only firm that broke away was a man
company, and he had no hesitation
coming to the opinion that they w
tainted. He attributed the trouble
Dublin mainly to Socialism and Syn
calism, which he urged them strongly
oppose whenever they appeared.

R.I.B.A. PROBLEMS IN DESI

The Board of Architectural Educatio
the Royal Institute of British Archit
announce that the designs submitted
the following students who are qualify
for the Final Examination have b
approved:—

Subject XII. (*a*).

Design for a Lighthouse.

F. A. Addey.
W. B. Binnie.
G. W. Callander.
L. E. Carreras.
A. E. Davidson.
E. C. Davies.
H. Dicksee.
L. A. Elsworth.
J. D. Grant.
S. B. Howard.
H. G. Leigh.
E. C. Preston.
N. S. Robinson.
H. M. Whitehead.
A. J. Wood.
N. B. Weekes.
H. Bagenal.
A. S. Burnett.
J. Carey.
G. A. Cosser.
G. Davidson.
H. F. Davies.
R. A. Duncan.
J. C. Fowell.
A. F. Hooper.
G. A. Langdell.
R. H. Philp.
A. W. Robertson.
A. Silcock.
F. Williamson.
R. S. Wallace.

Subject XII. (*b*).

Design for a Golf Club House.

P. J. Adams.
H. Andrew.
F. A. Darley.
J. Blackford.
R. Cawkwell.
C. C. Cheek.
J. A. Clarke.
A. L. Dotto.
V. Dyson.
J. C. Farrer.
L. S. Ford.
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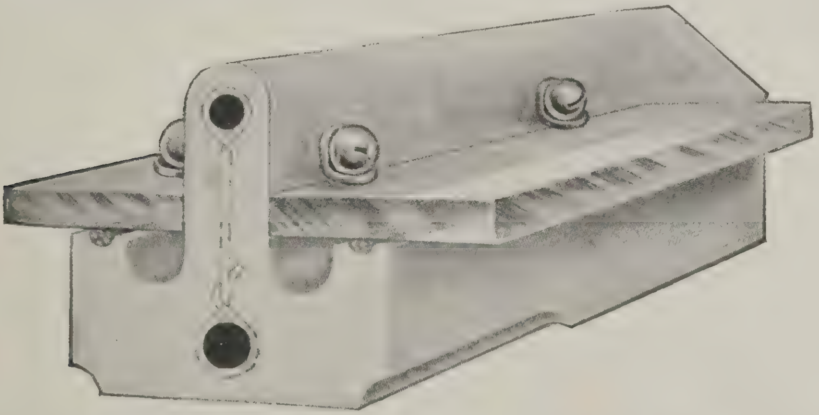

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ELECTRICAL NOTES.

Electric Automatic Temperature Control.

All those who have anything to do with the heating of buildings know that the great drawback of central heating, in any form, is that there is no effective control. The man with the coal fire, oil stove, gas or electric radiator very quickly experiences any inconvenient rise in temperature and can deal with it promptly. But with steam or water heating, for some reason or other, the sense of excessive heat is usually not apparent until the temperature has become excessively uncomfortable. If the windows cannot be opened, the mere screwing up of the valve has no appreciable effect for a long time, because the radiator goes on radiating heat, owing to the presence in it of hot water or steam, and because it is constructed to radiate. The Steam Fittings Co., Ltd., of West Drayton, have placed on the market a system of automatic electric control for use with hot water or steam heating installations, etc. As applied to an ordinary low-pressure steam radiator, the device comprises a contact thermometer, which is placed in any desired position in the room and connected to a solenoid fixed on the supply pipe of the radiator. With a predetermined rise in temperature the solenoid is energised by the closing of a circuit, and a disc is attracted by the polar extensions, thereby closing a double heat valve and shutting off the steam supply. The operation is reversed by a drop in temperature.

This arrangement is for use on circuits of from 100 to 250 volts continuous current, but an alternating current pattern is made for 110 volts 50 periods for a ¾-in. valve. In other cases direct current has to be obtained from an electrolytic rectifier. The makers guarantee to keep the temperature of the room constant within 2 degrees Fahrenheit of the point at which the device is set. Another modification is applied to a steam boiler, where an internal contact thermometer is used which is screwed into the boiler and connected electrically to the solenoid operated valve in the steam supply pipe. The temperature is regulated by turning a screw at the point where the thermometer is screwed into the boiler, and it is claimed that temperature differences of .5 degrees Fahrenheit above or below the setting will operate the valve. The solenoid only consumes about 5 watts, and no personal attention is required beyond the setting.

Umbralux.

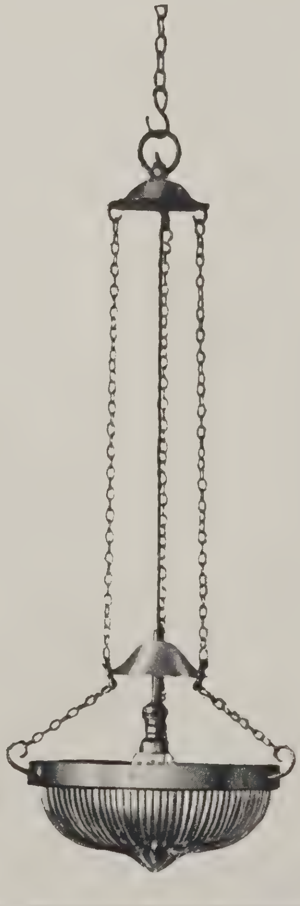
Under this rather curious contradictory title, the B.T.H. Co. have introduced a new kind of fitting which is a very effective semi-indirect lighting unit. It consists of a large upper reflector made of matt-white composition and moulded to a fluted radial pattern. This covers a cluster of Mazda lamps, below which is suspended an inverted Veruria or Pyro reflector. A small portion of the light is diffused by the latter in the form of direct illumination, but the greater part is thrown upwards on to the composition reflector, which in turn distributes it by reflection over a large area. A hook on the top of this reflector permits of hanging the fitting, if desired, by a chain. All the metal parts are finished in dull nickel.

The Wardle Half-Watt Lantern.

The Wardle Engineering Co., Ltd., of Manchester, have not been long in introducing a lantern on their well-kn
principles for use with the new half-
lamp in street and shop-window light
This lantern, which is well ventilated
weather-proof, is constructed so that
height of the lamp in the fitting car
adjusted so that the filament is in
correct focus. The reflectors are desig
to give the maximum candle-power a
angle of 20 degrees from the horizo
the filament itself being above the leve
the bottom of the upper reflector;
horizontal rays are reflected from the
terior of the top reflector down to
conical lower reflector, which is susper
apex upwards under the lamp. The u
and lower rays are also reflected on to
lower reflector, and thence outwards.
lantern is 3 ft. over all, and can be
plied with or without an automatic
out for series working. It is supplie
Messrs. Nathan and Allen, of Q
Anne's Chambers, Westminster, who
the London representatives of the mak

Trafalgar Square Demonstration.

On Sunday last there was a demons
tion of the London building trade worl
in Trafalgar Square. Mr. S. Stenr
President of the London Building In
tries' Federation, occupied the chair on
principal platform, and among the o
speakers were Mr. Will Thorne and Mr
Kinneburgh, the latter representing
electricians. Two resolutions were pas
The one re-affirmed the men's determ
tion to resist "the masters' attempt
destroy trade unionism," and the o
embodied a protest against the actior
the South African Government in decla
martial law and deporting trade u
leaders without trial.



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urveying Instruments and their Adjustment. By G. A. T. MIDDLETON, A.R.I.B.A.
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COMPETITIONS.

Masonic Hall, etc., Nottingham.

The assessor in the above limited competition (Mr. Robert Evans, F.R.I.B.A.) has awarded first place to Messrs. John Howett and Son, of Nottingham. The premiums have been gained by Messrs. Brewill and Baily, Mr. W. D. Pratt, and Messrs. Sutton and Gregory. The buildings, to be erected on a site in Chaucer Street, are estimated to cost between £20,000 and £25,000.

Barnsley Town Hall.

Members and Licentiates of the R.I.B.A. are advised that the conditions of the above competition are not in accordance with the published regulations of the Royal Institute for architectural competitions. The competitions committee are in correspondence with the promoters with a view to amendment of the conditions.

Folkestone Band Pavilion.

In our issue for January 21 it was stated that the first premium in the above competition had been awarded to Messrs. Palmer, Jones, and Grant. This is a slight error; the names should read Messrs. Palmer-Jones and Grant.

Alexander Thomson Travelling Studentship.

The trustees of the Alexander Thomson Memorial offer a prize of £60 for the best set of drawings for a college memorial lecture hall; also a prize of £20 for the second best set of drawings should the number of the competitors and the quality of the work submitted be such as to warrant an additional prize. Drawings are to be sent by January 15, 1915, to Mr. C. J. Maclean, 115, St. Vincent Street, Glasgow, secretary to the trust, from whom full particulars may be obtained.

PROJECTED NEW WORKS

Technical School, Torquay.

A new technical school is to be built on the "Elms" site, Torquay, at a cost of £11,000.

Picture House, etc., York.

York City Council have approved amended plans for a picture house and café, to be erected in Coney Street.

Sessions House, Newington.

Designs have been approved by the Secretary of State for a new Sessions House to be erected on a site between Avonmouth Street and Union Street, Newington, S.E.

Washhouses, Manchester.

Manchester Corporation have approved a scheme for the erection of public washhouses on land adjoining the Moss Side, Cheetham. It is also proposed to erect a washhouse adjoining the Gorton Baths.

Cinema Theatre, Dublin.

A new cinema theatre is to be erected at No. 99, Talbot Street, Dublin. It is to be built for Mr. C. A. McEvoy, from the plans and specification of Mr. Geo. L. O'Connor, F.R.I.A.I., 27, Dawson Street.

Workmen's Cottage Scheme, Finchley.

Finchley District Council have decided to apply to the L.G.B. for sanction to a loan of £93,443 for the building of 300 workmen's cottages on the Woodhouse Estate, North Finchley. The scheme provides for 240 houses each to cost £265 and sixty houses to cost £225 each, the more expensive dwellings to be let at 8s. 6d. a week and the less expensive at 7s. 6d.

Shawlands Academy Extension.

Plans have been submitted to the Shawlands School Board for an extension of the Academy, involving a cinematograph room and an observatory, at a cost of £20,000 to £30,000.

Aeroplane Factory, Selby.

It has been decided to build an aeroplane factory on the site of several hundred acres recently purchased at Barlow, near Selby, by Messrs. Armstrong, Whitworth, and Co., of Elswick Works, Newcastle-on-Tyne.

Garden Village, Chester.

A scheme, prepared by Mr. Patrick Abercrombie, for the laying-out of a portion of the Buddicom Estate (Hough Green) has been approved by Chester Town Council. It is proposed to obtain designs and estimates for the erection of 131 houses.

Housing Scheme, Coventry.

Coventry City Council have sanctioned the application for a loan of £40,282 19s. 6d. for the purpose of building 198 artisan dwellings by the municipality. Sites are to be secured in Goring Road, Stepney Road, Clay Lane, Hastings Road, St. George's Road, and Severn Road.

Picture Palaces, etc., Hull.

Hull Corporation Works Committee have passed the following plans: Sixteen houses, Wharncliffe Street, J. W. Smith; eight houses, Huntingdon Street, H. Smith; picture hall, Anlaby Road, Tower Palace Company; picture hall, Beverley Road, Strand Theatre Co., Ltd.; picture hall, Cleveland Street, Blackmore and Sykes; additions, Stoneferry, Hull Oil Manufacturing Co., Ltd.; additions, King Edward Street, Powolny, Ltd.; nine houses, Park Avenue, J. E. Wray.

London.

Consent has been given by the L.C.C. to the erection of the following works:—

Battersea.—Addition and covered way at the Anti-Vivisection Hospital, Prince of Wales Road, Battersea, next to Albert Bridge Road, on the application of Mr. E. T. Hall on behalf of the Anti-Vivisection Hospital.

City of London.—Two additional storeys, on the application of Mr. H. O. Ellis, at "The Times" printing premises, Queen Victoria Street, City.

City of London.—Buildings on the western side of Bishopsgate, City, next to Pindar Street and Primrose Street, on the application of Mr. S. H. Burdwood.

City of London.—Building upon the site of No. 2, Lancaster Place, Minories, on the application of Mr. A. Gregory.

City of London.—Uniting No. 23, Great Winchester Street, and No. 15, Austin Friars, City, by means of an enclosed gangway at the first floor level, on the application of G. Trollope and Sons and Colls and Sons, Ltd., on behalf of the British-India Steam Navigation Co.

Clapham.—Building on the site of Nos. 135 and 137, Larkhall Lane, Clapham, on the application of Messrs. Reynolds and Hicks, on behalf of Mr. E. Sweetland.

Holborn.—Shop front at the Y.M.C.A. Central Building, Tottenham Court Road, next to Bedford Avenue, on the application of Mr. D. H. Waddell, on behalf of McCombie Brothers, Ltd.

Islington, East.—Petrol store and intercepting chamber in the forecourt of No. 58, Highbury Grove, Highbury, on the application of Mr. W. P. Render, on behalf of the Clarence Co-operative Motor Cab Association, Ltd.

Kennington.—St. Anselm's Churc the western side of Kennington Road the southern side of Sancroft Street, nington, on the application of M Adshead and Ramsey, on behalf o Rev. R. H. Hutchinson.

Kensington, South.—Studio additi the rear of 34, Addison Road, Kensin next to Holland Park Road, on the cation of Messrs. Collcutt, Hamp, Tilden.

Newington, West.—Six buildings, used as working-class dwellings, up site in Kennington Park Road, South on the application of Messrs. Josep Smithem on behalf of the Guinness

Rotherhithe.—Eight blocks of dwe houses upon a site on the northern s Chilton Street and the southern si Plough Road, Rotherhithe, on the ap tion of Mr. E. C. R. Monson on beh the Trustees of the Sutton Estate.

St. George, Hanover Square.—Bu upon the site of Nos. 131, 132, 133 134, New Bond Street, exceeding 2 cubic feet in extent, and uniting building with the Æolian Hall, on th plication of Messrs. Inman and So behalf of Mr. H. R. Inman.

St. Pancras, North.—Buildings o northern side of Fitzroy Park, St. Pa on the application of Mr. J. Farrer.

Southwark, West.—Building upon between Emerson Street and Gardens, Southwark, on the applicat Messrs. Crickmay and Crickmay, o half of Messrs. Beck and Pollitzer.

Strand.—Portion of a building Kingly Street (Regent Street), on th plication of Mr. E. T. Hall, on beh Liberty and Co., Ltd.

Strand.—Alterations at the Covent Gambrinus Restaurant, Rupert Stree Wardour Street, Soho, on the appli of Messrs. Wratten and Godfrey.

Woolwich.—Additional cubical ext the London General Omnibus Com garage, King's Highway, Plumstea the application of S. W. Francis an Ltd.

Wandsworth.—Bay windows and p to seventeen houses in Moyser Roa house in Nimrod Road, and one ho Pendle Road, Streatham, on the ap tion of Mr. A. Dawkins. on beh Messrs. B. T. and W. J. Flexman.

The London Lock-out and Insur Benefit.

On Monday the Board of Trade of Referees announced their decisio the Insurance Act does not provide payment of out-of-work benefit, present circumstances, to the men out in the building dispute.

R.I.B.A. and Traffic Problems

At the conclusion of the pap "Traffic Problems of London," whi read before the Royal Institute of Architects on Monday, January 26, b Sir Herbert Jekyll, formerly head London Traffic Branch of the Bo Trade, the following resolution adopted by a unanimous vote an ordered to be sent to the authoritie cerned: "That what is urgently requ a central authority with power first down the lines of arterial roads, secondly, to require local authorit make their schemes conform to pres lines which happen to traverse their

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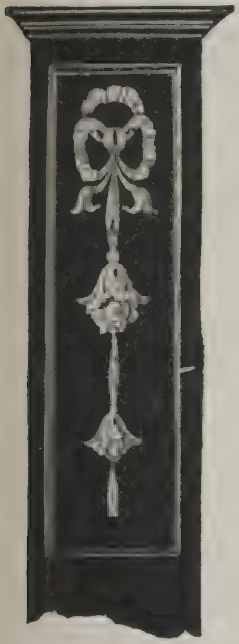

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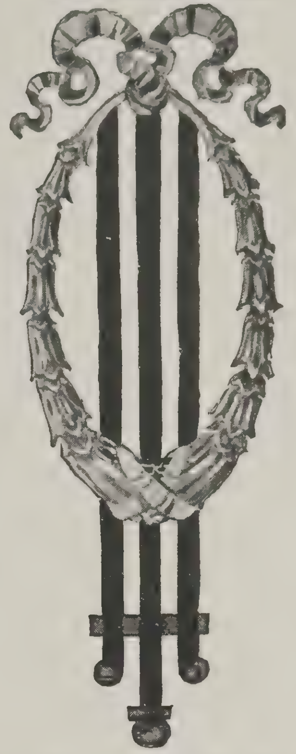

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Tenders.

Information from accredited sources should be sent to "The Editor," at latest by noon on Saturday if intended for publication in the following Wednesday's issue. Results of Tenders cannot be accepted unless they contain the name of the Architect or Surveyor for the work.

Gorleston:—Additions to the East Anglian Joint Council's Residential School for Blind and Deaf Children at Gorleston. J. E. Burton, Architect, 11, Bank Plain, Norwich:—

W. J. Hannant, Norwich	£615	10	0
Boulton and Paul, Norwich	602	19	1
F. A. Osborne, Yarmouth	552	18	4
E. G. Bland, Yarmouth	501	5	5
W. G. Porter, Cromer	491	15	4
J. R. Chaston, Yarmouth	487	2	4
B. G. Beech, Yarmouth	474	10	6
H. C. Greengrass, Norwich	439	0	0
Grimble and Son, Yarmouth	408	9	6
Sparkes and Latten, Norwich	392	10	0
Carter and Wright,* Yarmouth	382	6	0

* Accepted.

Heanor.—Accepted for construction of new cookery and dining rooms at the Secondary Schools, for the Governors. A. Earnshaw, Ilkeston, £1,520.

Harwell (Berks).—For construction of four workmen's dwellings, extension of a pipe sewer, construction of house and surface-water drains, sinking a well, and erection of wrought-iron fencing and gates, for the Wantage R.D.C. J. W. Harris, Surveyor, Challow, Wantage:—

G. Percy Trentham, Ltd., Birmingham	1,262
E. Organ and Sons, Oxford	1,000
R. Stibbs and Son, Wantage	809
Cox and Son, Oxford	809
Simms and Son, Oxford	802
J. P. Barrett,* West Hanney, Wantage	797

* Accepted.

London, W.C.—For erection of premises, Portugal Street, W.C., for W. H. Smith and Son. H. O. Ellis, M.S.A., Architect, 46, Fenchurch Street, E.C.:—

Foster and Dicksee, Ltd.	£159,867
Holliday and Greenwood, Ltd.	157.638
Holloway Bros., Ltd.	157,000
Wallis and Son, Ltd	155,742
J. Carmichael	155,425
W. Downs	155,190
Holland and Hannen, Ltd.	154,444
W. Blake, Ltd.	153,850
F. and H. Higgs	152,400
A Fairhead and Son	152,168
Killby and Gayford	151,820

Southampton.—For erection of four cottages at the Otterbourne waterworks, for the Corporation:—

H. Stevens and Co.	£1,435	0	0
Jenkins and Sons, Ltd.	1,394	0	0
J. E. Franklin and Co., Ltd.	1,337	16	4
A. Payne	1,334	17	9
Holly and Herbert	1,272	0	0
W. A. Fussell	1,264	6	10
Hales and Sons	1,230	0	0
W. Saunders	1,149	0	0
Pitfield Bros.,* Eastleigh	881	5	0

* Accepted.

ELECTRICAL INDUSTRY LABOUR MOVEMENT.

For the purpose of considering a proposal put forward by the London Electrical Masters' Association that a committee of workmen's representatives should be appointed to meet the Committee of the London Electrical Masters' Association, with a view to agreeing to working rules and terms and conditions of employment, a conference of masters and men was held at Caxton Hall last week. A large number of employers, including the members of the Masters' Committee, and delegates representing about 2,000 electrical union and non-union workers, attended. Mr. J. Horace Bowden, chairman of the Masters' Association, who presided, said that the sole desire of himself and the other masters present was to arrive at an agreement which would be fair to all sec and would improve the status of thos gaged in the electrical profession, wh employers or employed. He believed by a little friendly conversation it w be possible to smooth money difficu and settle any points that were in dis The resolution having been propose Mr. Leonard G. Tate, secretary of Association, a delegate suggested th neutral chairman should be selected the body of the hall in place of a r sentative of the masters; but it was st that Mr. Bowden was Poplar Bor electrical engineer, not an electrical tractor, and the suggestion was pressed. A delegate from the work claimed that, having regard to the creased cost of living, 11d. an hour minimum was not an exorbitant dem Mr. J. Muir, another delegate, who he was prepared to accept the offer o masters in good faith, in order that proposal might have proper considera moved as an amendment that it shoul referred back to the Electrical Tr Union and the Association of Central tion Engineers.

Mr. W. R. Rawlings, for the mas said that by adopting the resolution would have an opportunity of conside jointly what was best in the interest the trade as a whole.

In the course of a discussion lasting hours and a half it was pointed out under the rules of the trade union it impossible for any of its members to s on such a committee as that propo and eventually the original proposal withdrawn and the amendment accepted.

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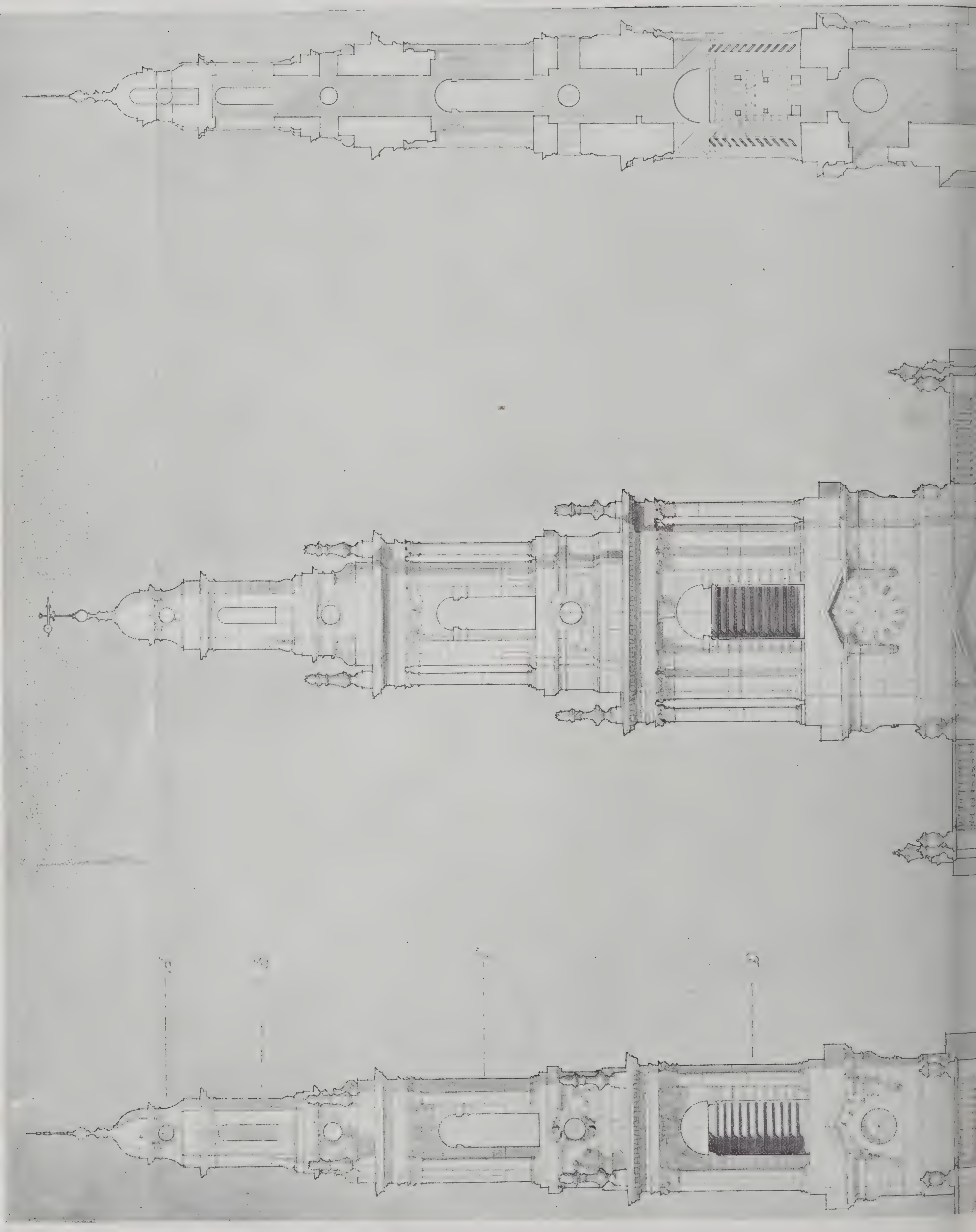
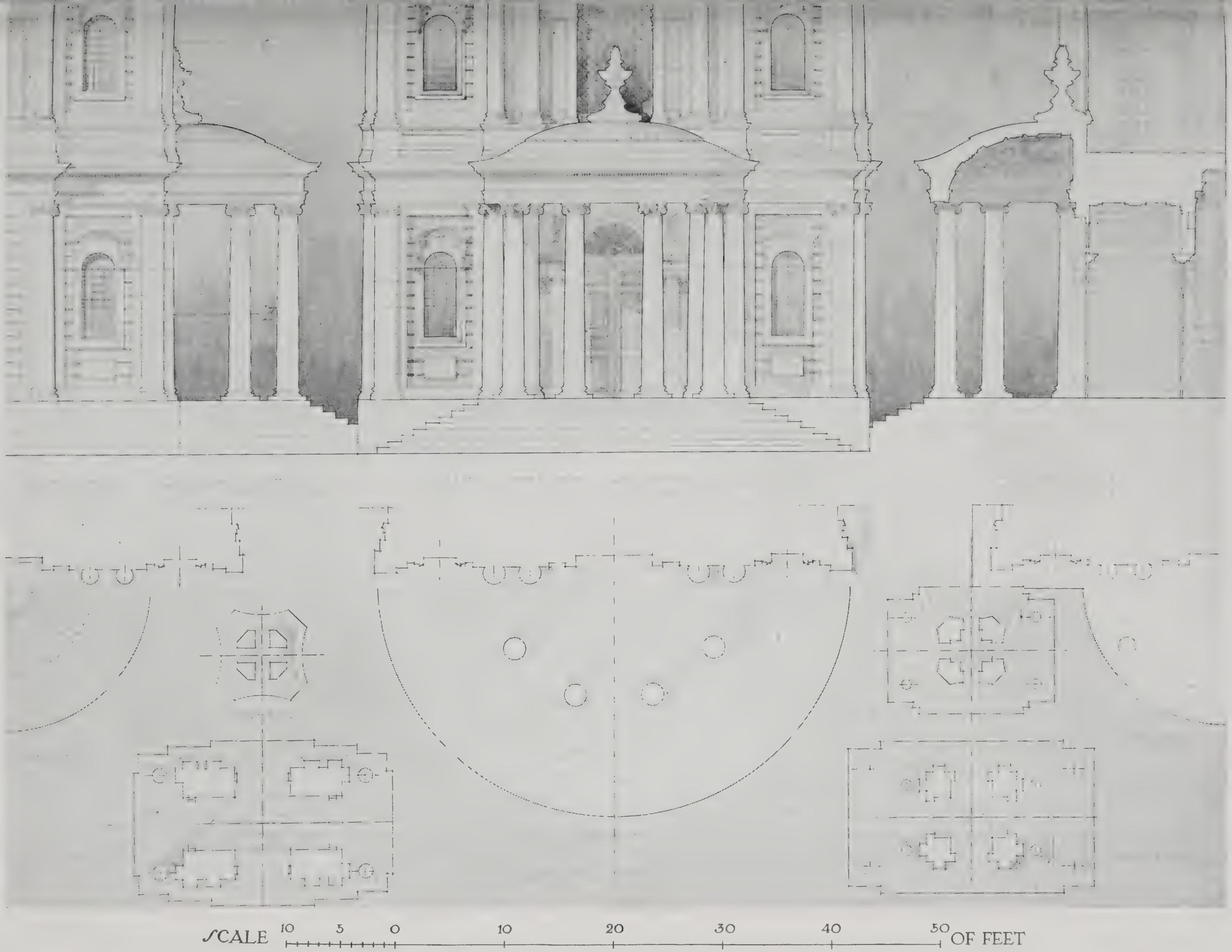
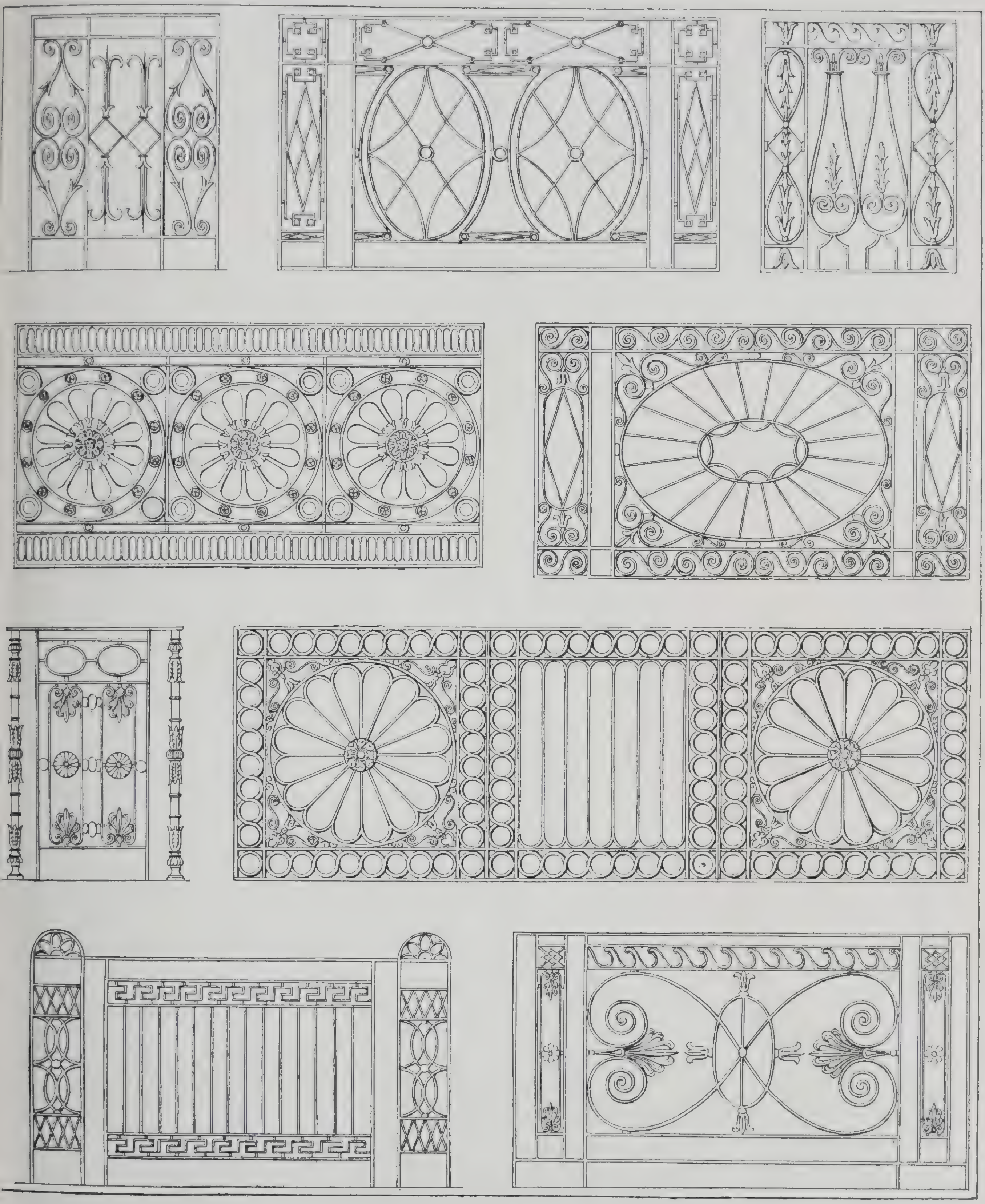
lement to " The Architects' and Builders' Journal," Wednesday, February 4, 1914.

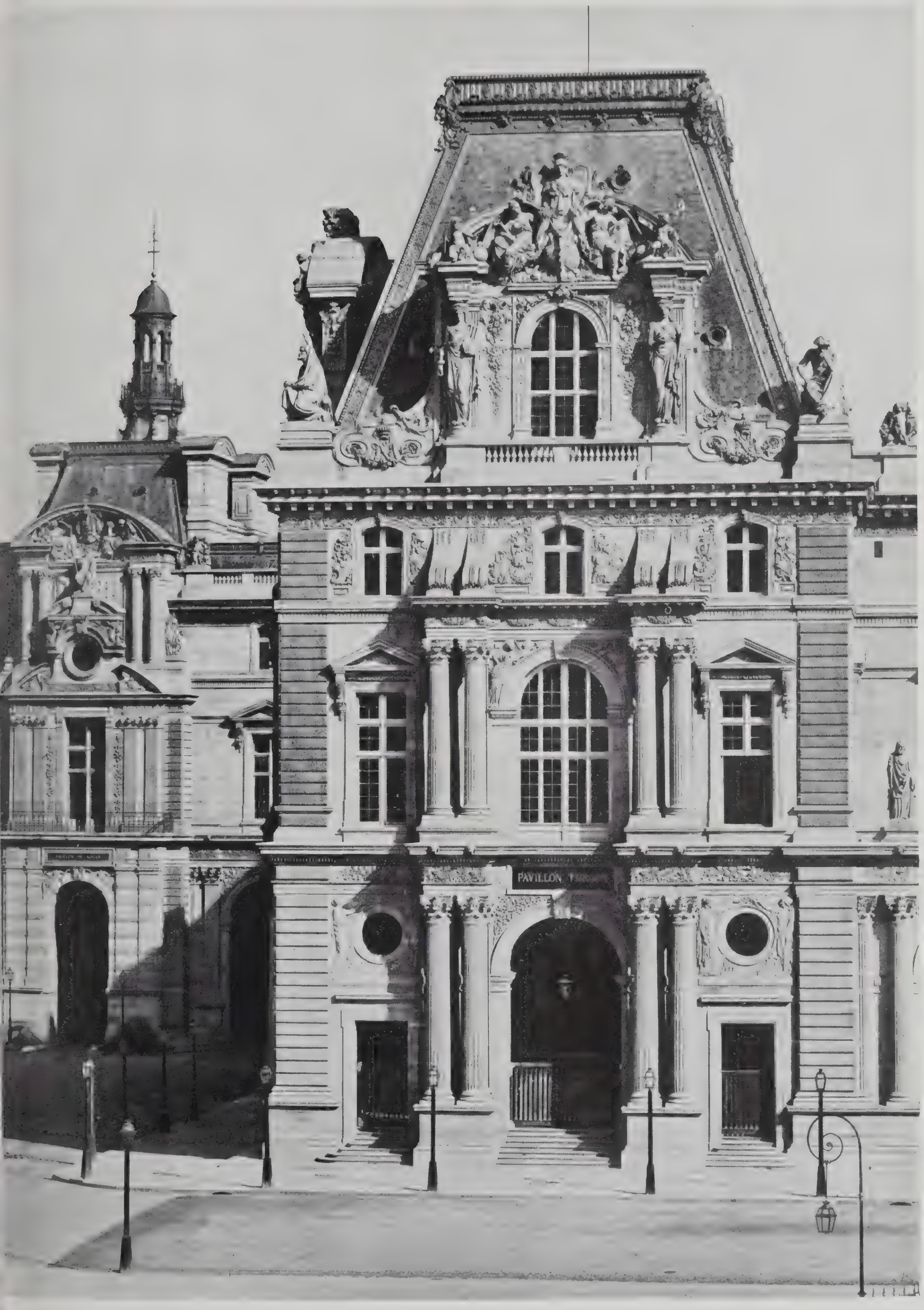




STUDENTS' DRAWINGS. VI.—CHURCH OF ST. MARY-LE-STRAND, LONDON. JAMES GIBBS, ARCHITECT. DRAWN BY H. C. MASON.

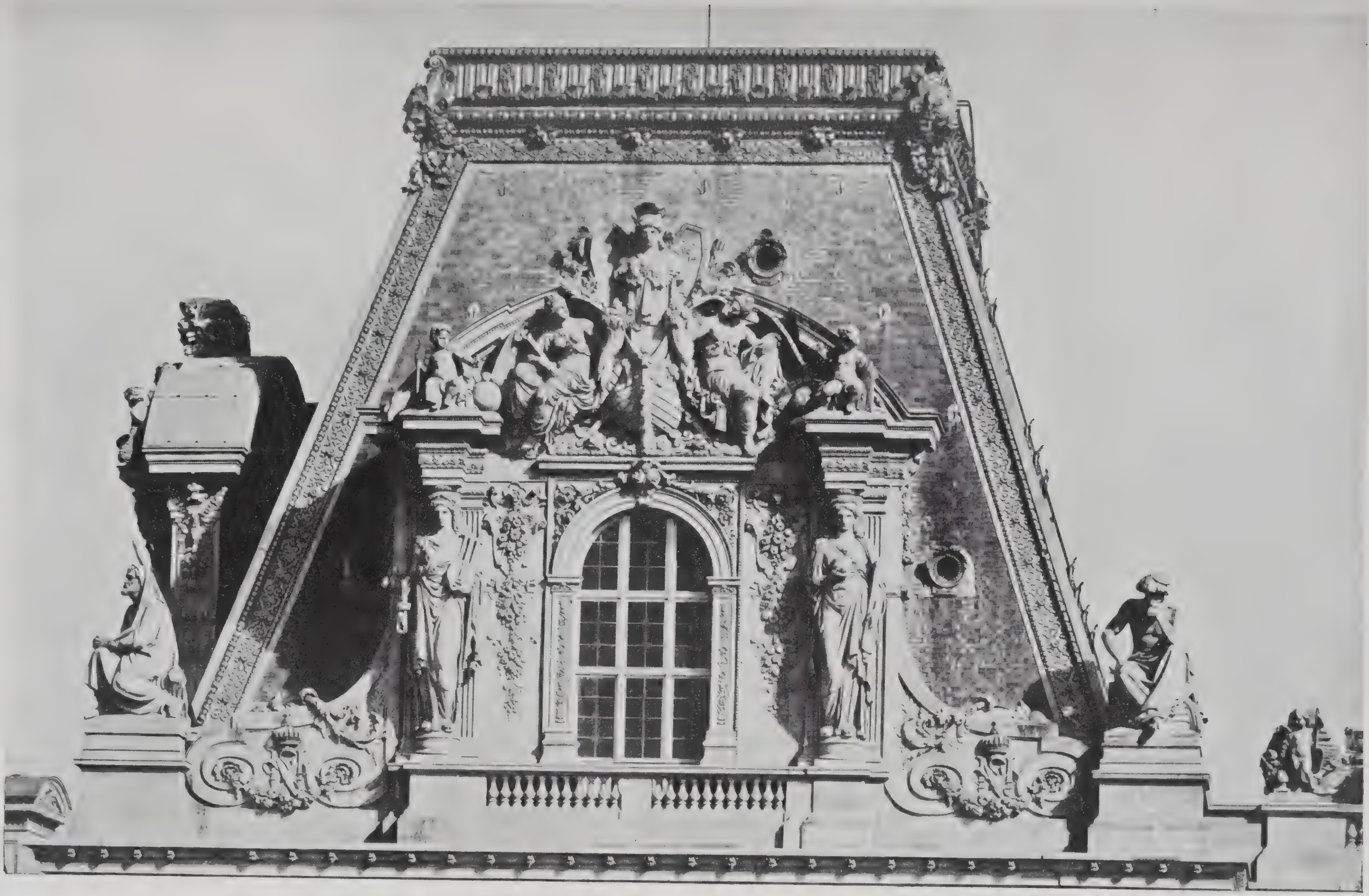


COTTINGHAM'S DESIGNS FOR IRONWORK. I.—WINDOW GUARDS AND BALCONY RAILINGS EXECUTED IN LONDON.



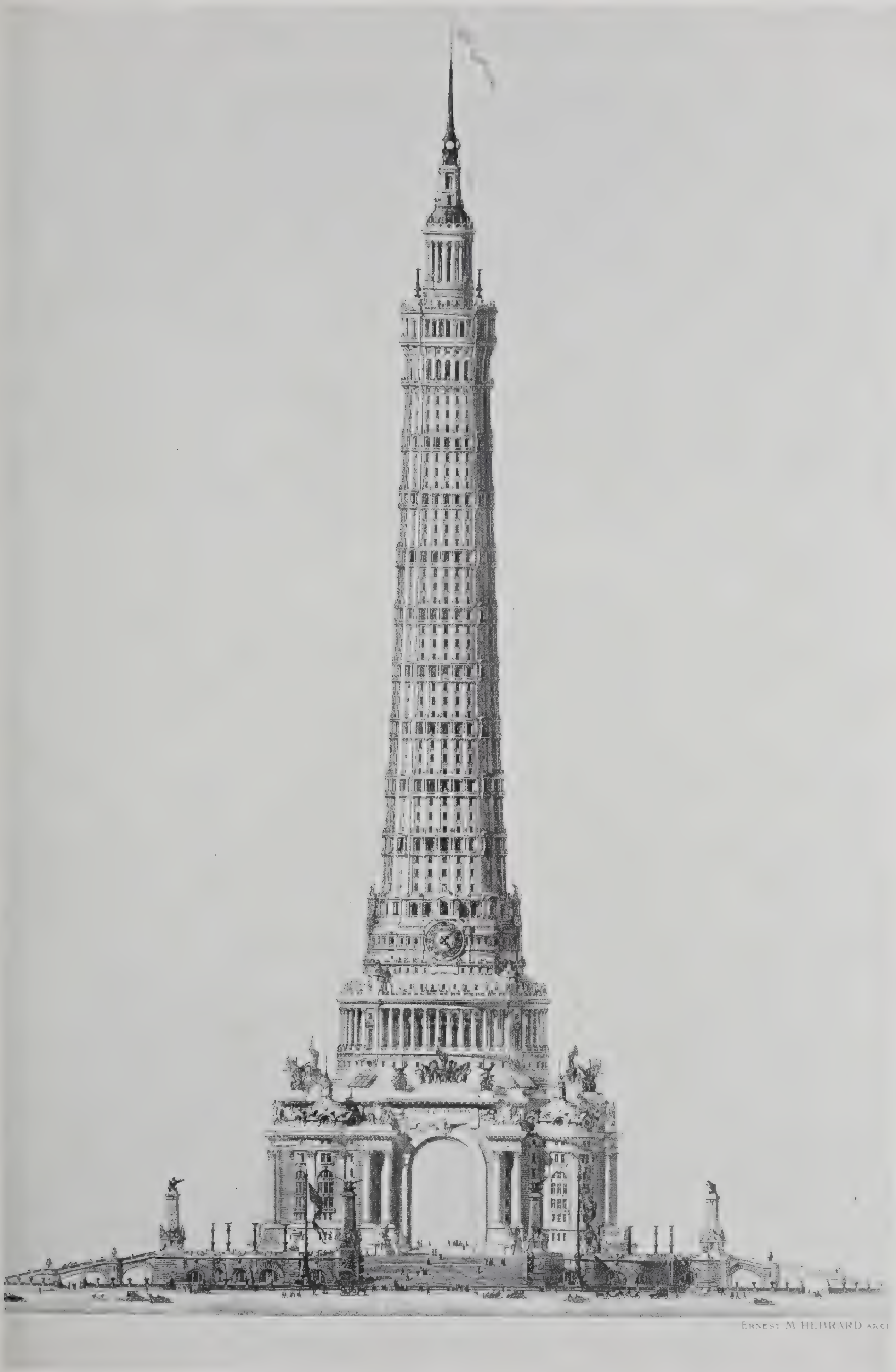
NINETEENTH-CENTURY FRENCH ARCHITECTURE. II.—PAVILLON TURGOT, THE LOUVRE, PARIS.

LOUIS VISCONTI, ARCHITECT.

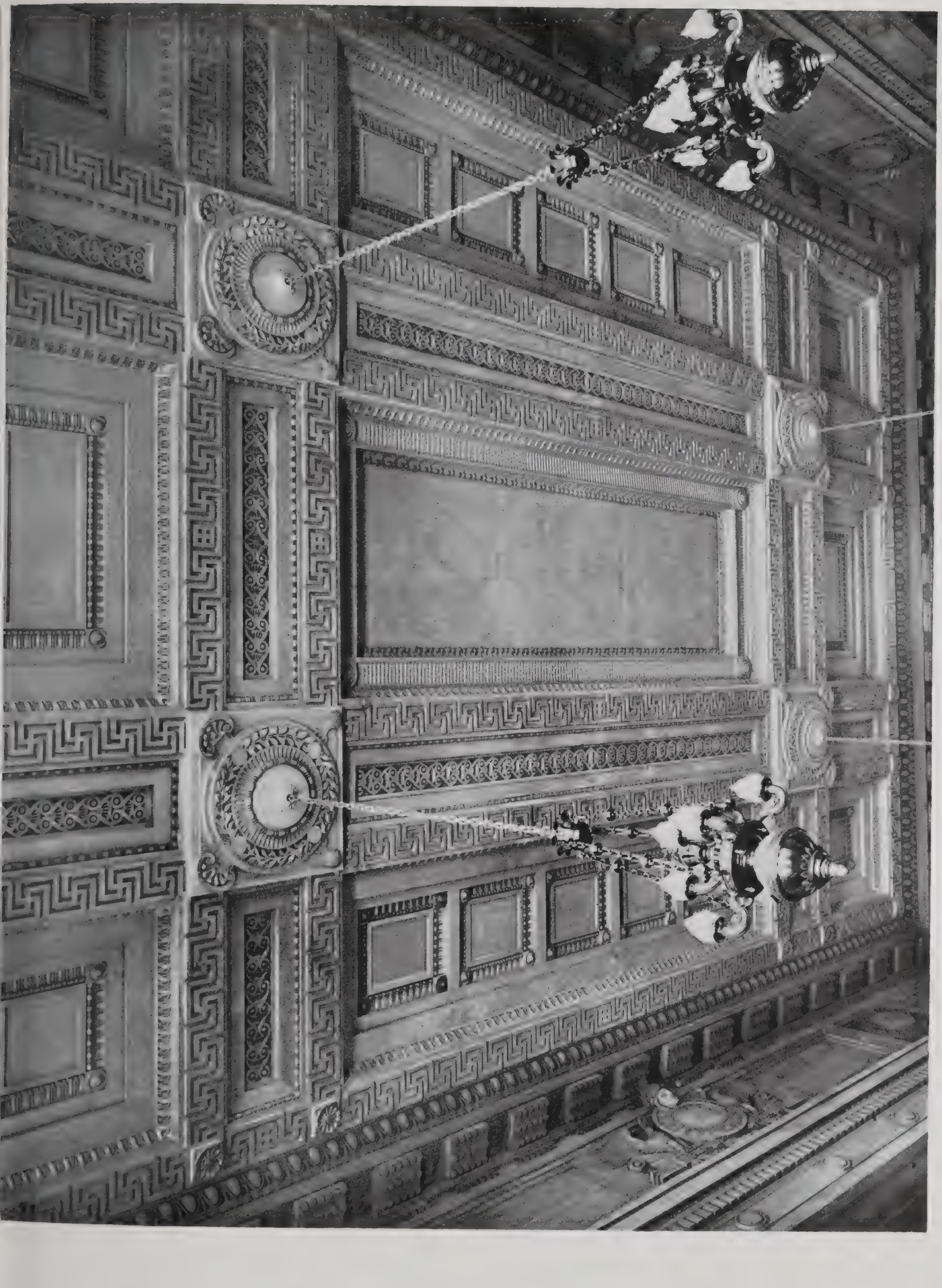


NINETEENTH-CENTURY FRENCH ARCHITECTURE. III.—PAVILLON TURGOT, THE LOUVRE, PARIS: DETAIL.

LOUIS VISCONTI, ARCHITECT.

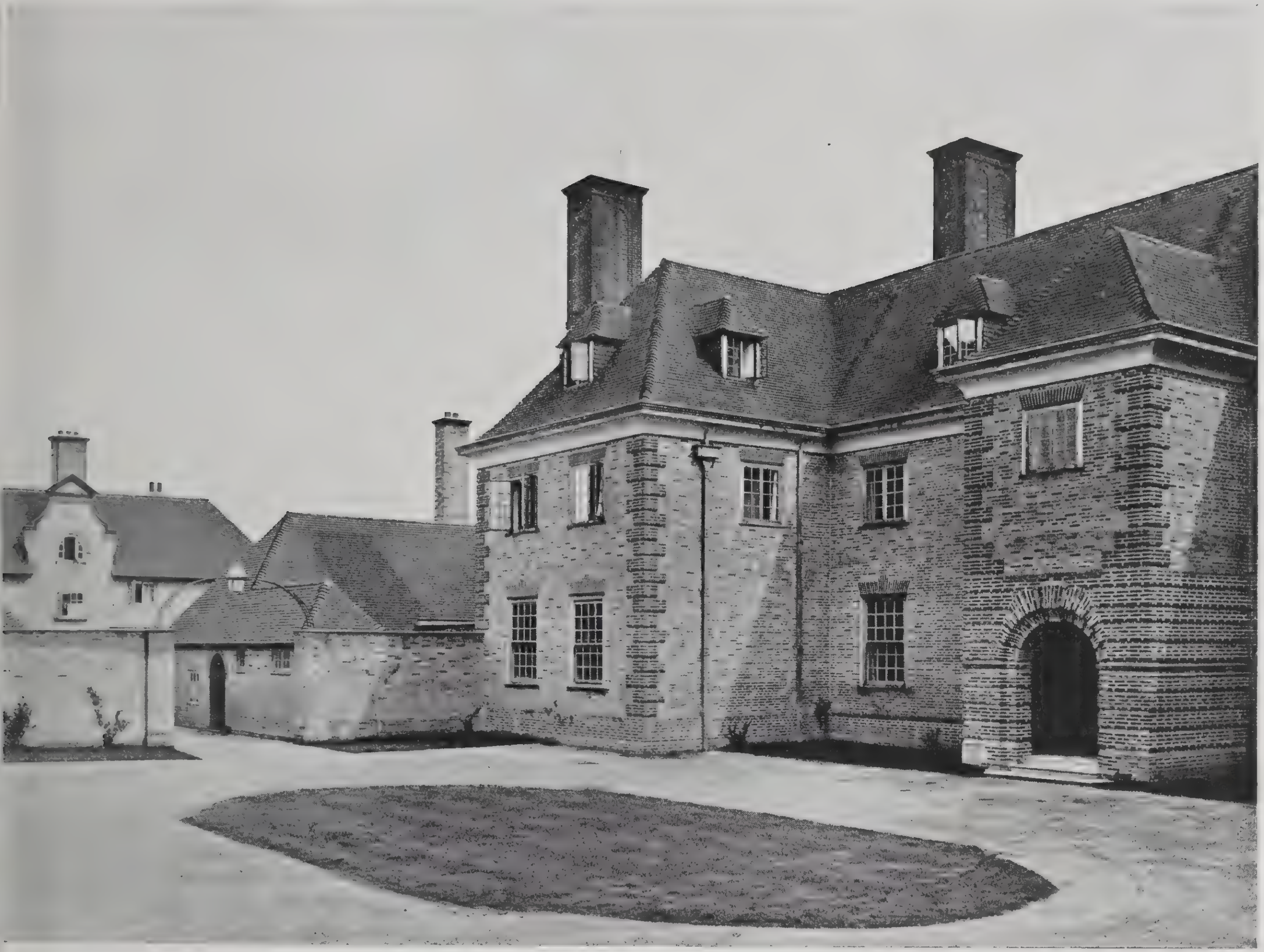


MONUMENTAL ARCHITECTURE. VIII.—AN INTERNATIONAL WORLD CENTRE: DESIGN FOR A "TOWER OF PROGRESS."
ERNEST M. HÉBRARD, ARCHITECT.

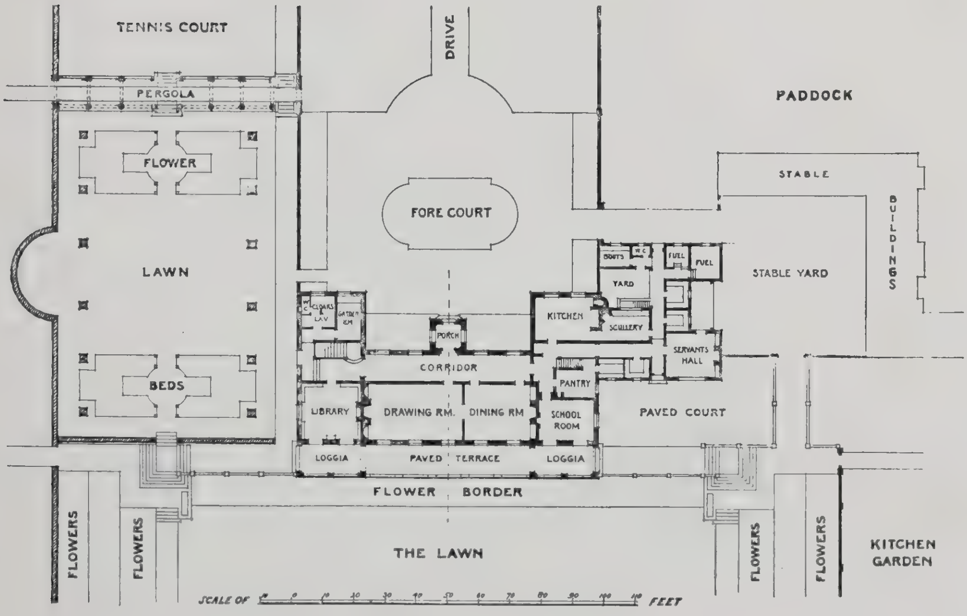


NEO-GREC DETAIL. XII.—CEILING, GILMOUR HALL, STUDENTS' UNION, LIVERPOOL.

PROFESSOR C. H. REILLY, M.A., F.R.I.B.A., ARCHITECT.



Entrance Front.



MODERN DOMESTIC ARCHITECTURE. XX.—"AMERSFORT," BERKHAMSTED.

ERNEST WILLMOTT, F.R.I.B.A., ARCHITECT.

THE
ARCHITECTS' & BUILDERS
JOURNAL.

Wednesday, February 11, 1914. Volume XXXIX. No. 997.

No. 71.

(From Piranesi.)

THE ARCHITECTS' & BUILDERS' JOURNAL.

FEBRUARY 11, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39 No. 997.

An Architect's View of Labour Unrest.

THE prevalent feeling of labour unrest has its latest manifestation in the events leading up to the present lock-out, which has occasioned an almost complete stoppage of important building work in London. The causes of the trouble have been repeatedly set forth and discussed from the respective points of view of the capital and labour directly involved, sometimes with obvious bias on either side, but quite often in a spirit of fairness and evident desire to discover and remove the grievances which both parties must recognise as deep-rooted.

Upon the principle that lookers-on see most of the game, it may be that the architect's distant view, which has up to the present received little prominence, would search out these root-causes with greater truth than the closer and more intimate vision of the parties embroiled in the profitless struggle—an intimate view is apt to discern details rather than elemental forms. Let us consider labour in its relations with the building trade at the present day from the standpoint of such a deeply interested outsider.

First, it will be well to postulate three divisions of labour, by no means immutable, and often probably not even suspected by the units concerned, but very apparent to architects engaged in general practice covering anything like a wide scope. Quite irrespective of trade or craft subdivisions, it will, we think, be admitted by such that there are roughly three classes of workmen. First, the thoroughly competent craftsman well versed in all the practice and technique of his special trade and of its relations with the work of his fellows, and taking a craftsman's pride and interest in his work. We know even builders' labourers (technically "unskilled") who clearly fall within this class.

It may be said, and with justice, that these men are yearly becoming fewer; they do, however, still exist in considerable numbers, and it is a real pleasure to encounter them and experience the merit of their work and their sound common sense, which does not as a rule stop short of subjects outside their means of livelihood. Such men are usually products of the old apprentice system. They are always worth their money, and are probably as sure of constant employment as is humanly possible, being generally attached to well-established firms with connection work. They are not infrequently rather intolerant of "new-fangled ideas," members of no unions, and with downright views as to the futility of strikes, in which they seldom or never willingly participate. With the gradual diminution of their numbers, however, their identity as a class, it is to be feared, is becoming lost, and it may be doubted whether even the most highly skilled of their successors views his work in quite the same spirit.

The second class is constituted by the general body of artisans—casual labourers in the sense that each time a job on which they are engaged finishes, or for some reason outside their control is checked, they are compelled to seek fresh employment. It is among such men that the large body of trade unionists (and strikers) is to be found, and it is perhaps not t wondered at that workers with no feeling of securit tenure, liable to be dealt with summarily at any t by a power of which they only feel the effects, sh take measures to combine for the collective protec of their material interests ; and it is equally not won ful that from the same causes they should feel exaggerated respect for formal agreements t secured. Can it be wondered at, either, that such are unable to feel that pride and interest in their w which a continuity of employment under sympath control can alone secure?

The third class—employees mostly of jobbing speculative builders, handymen often rather t craftsmen—are probably rather despised by the cla above them, but they also appear to enjoy consider greater fixity of tenure in their employment, and, the first-class men, are usually non-unionists and strikers.

May we not justly assume from consideration these facts that "Labour unrest," as the term is use Capital, is but a phase of the unrest which is the nor condition of the worker in the middle class, ne knowing with certainty when his employment terminate or who his next employer will be? Furt is it not fair to recognise that the worker who ma the old times have had a respect for a visible empl whose knowledge of building was not inferior to own can have little for the employer whose sole nection with him is (as a recent correspondent put "by a cash nexus," and whose business is run by medium of a roomful of telephones?

Whither do these reflections lead us? Perhaps rather unexpected direction. It has become increasi common for architects to entrust special works to contractors who are specialists in their particular By so doing they believe that they obtain in most c more reliable work and more experienced workm It certainly seems that such sub-contractors are be able to keep together regular staffs, and, by offering advantage of constant employment, to obtain work more skilled and interested in their work. The pa employment of such sub-contractors, however, always been a fruitful source of friction in the Lon building world, though, singularly, the North Cou custom of letting each trade separately does not app to work awkwardly in practice. The Financ Contractor is apparently a necessity created by increasing magnitude of modern building un takings: is the suggestion worthy of consideration a system of complete and recognised sub-contract (as opposed to the thinly-veiled sub-letting whic not uncommon in several trades, and the pa "specialist" work of others) would solve many la troubles and still leave the organising general tractor a field for his labours? It is possible to conc recognised firms of brickwork contractors, mas joiners, and plasterers organised on co-operative or partnership lines, in time attaining to something of position of the old craft guilds, and by being position to offer to the competent workman continu loyment, encouraging him to take more pride and rest in his work than it is ever possible that he uld do in his present transitory state.

oncurrently with this, some improvement in the sent means of technical education is highly to be ired. Such crafts as brickwork and plumbing, as ht by a specialised class of "technical instructors" nany a public training school, are singularly joyless irs. They might be so different. The men who their training under such auspices are of quite fferent type from the older class now dying out, and n the benefit of contact and association with these urceful craftsmen altogether ceases, as in time it t, the situation is certain to become far worse. The renticeship system is one that is subject to many ve abuses under present conditions, but it is pos- e that a co-operative firm of craftsmen might find difficulty in applying it, and by so doing would p the flame of tradition alight.

o sum up: the problem appears to the impartial oker as that of giving the worker more interest in work, which can only be secured by greater cer- ty of continuous employment, with the knowledge a reputation for good work will improve the mstances of the doer of it. It is not expected that views put forward will receive instant approval, ven favourable comment, but the continued recur- e of labour troubles, with all their inherent equences of inconvenience and even ruin to allied nesses, shows that something more than a mere hed-up truce and resumption on the old lines is led. G.

The Kennington Manor Estate.

HERE is something particularly gratifying in the reflection that the Royal Housing Scheme at Kennington is being carried out in a district re its architectural attractiveness will sound a note elief among much unlovely and depressing build- Everybody knows that there are interesting es still to be seen in Kennington, but their num- is not great; the prevailing characteristic of the hbourhood is rows upon rows of small dwellings to meet the needs of the rapidly increasing indus- population of London, and failing to provide even e uncritical tenants with a minimum of the con- ences that make for a decent existence. It is this less style of building that, dating from as far back e beginning of the nineteenth century, has spread an infection over the whole face of South-east don. One sees it as one enters, or passes out his district while travelling on one or the other of South Coast railways, and the sight is the sadder he contrast that it calls up—the contrast between and the more favoured localities where garden rbs are being built and a sordid building is own. We are not alone in hoping that the delling of the Duchy of Cornwall Estate, includ- he fine architectural lesson of the "homes for old le," will cause the rest of the Kennington ground lords to study the means of making their dreary erties conform a little better to the modern idea using.

Town and Factory.

UTS and smells at Exeter, of all places in the kingdom! One had thought that the ancient and noble Anglo-Norman and episcopal city was nd reproach of squalor, but a Local Government d inquiry held there last week with respect to a ne for the erection of working-class houses ght out certain complaints that sort but badly with complacent notions of a pure and serene eccle- cal atmosphere. According to a councillor who ted to the proposed site, "there were factories in icinity which gave out most unpleasant smells," "came from the tanneries, soap and tallow s, and a rag-and-bone factory." Also, "the district was healthy enough, but within a gunshot were three iron foundries, smoke and smuts from which rendered it impossible to keep windows open or the houses clean." This is, in effect (the case from Exeter being merely and mildly typical), a restatement of one of the problems for whose solution we look with hope to the newly developed wisdom and resource of the modern town-planner; who, however, can himself do no more than mitigate such nuisances by seeing that in future they are kept well to windward of the dwellings. Smuts and smells *per se* are more within the province of the engineer and the man of science, who should have but little difficulty in preventing them, the extinction, it may be supposed, being merely a matter of expense, which is a consideration of quite insignificant importance as compared with the common evil, prevalent at its worst in most of our "manufacturing towns," of poisoning the atmosphere for miles round with forty-factory power, and incidentally killing architectural decorum.

The Manchester Piccadilly Site.

MUNICIPAL Manchester has not yet decided upon the character of the new building it is proposed to erect on the site of the old infirmary in Piccadilly; but the voluminous reports and correspondence that have appeared in the Press of that city indicate a degree of popular excitement quite equal to that aroused in Nottingham by the Town Hall proposals or in Edinburgh by the Winter Garden scheme. The general desire seems to be for a Central Library and Art Gallery, but a suggestion for a new cathedral has been mooted by at least one correspondent, and there is also a lurking fear lest the expected Tramways Committee Report may upset all present calculations by recommending that new lines be laid across the site. Concerning the Art Gallery portion of the scheme, it is undeniable that Manchester at present has nothing to show in the way of a gallery that is worthy of comparison, say, with the Walker Gallery at Liverpool or the Birmingham Municipal Gallery. The Whitworth collection, perhaps the most valuable of Manchester's few art treasures, is indifferently housed in an un-central and inaccessible building near the New Infirmary, and the suggestion that this should be transferred to the proposed new Gallery is admirable from many points of view. We hope that the municipal authority will give this matter their early consideration, if and as soon as they decide to proceed with the library scheme, for the accomplishment of which the preliminary steps have already been taken.

The Cheap Cottage Again.

IN the Report of a committee appointed by the Central and Associated Chambers of Agriculture to consider the subject of rural housing, the opinion is expressed that the only entirely satisfactory solution of the problem would be to devise a cottage so cheap in construction, at no sacrifice of efficiency, that it could be let at 2s. 6d. a week, which was the lowest economic rent conceivable. Such a cottage would cost £143. It would appear, however, that we are shortly to have an opportunity of seeing the model of an ideal cottage that will cost a good deal less—in the "Women's Kingdom" section of the Children's Welfare Exhibition, where Mr. Arnold Mitchell, the hero of the £110 cottage, has undertaken to demonstrate the possibility of building a pair of labourers' cottages, having three good bedrooms upstairs, for £250, a sum which would admit of not merely an economic rent but a small return on the outlay if let at half a crown. It is stated on good authority that, in more than one county, cottages conforming to the bye-laws have been built for less than £123 apiece, so it is quite possible that Mr. Mitchell's £125 effort is really a business proposition—as regards those localities, at any rate, where materials are fairly cheap. Whether this price is likely within the near future to become the standard rate of cost is another question altogether. However, Mr. Mitchell's demonstration will be awaited with interest as a feature in an exhibition which is sure to attract the attention of all who take an active or a benevolent interest in the housing problem.

Rural District Councils.

THE reluctance of certain Rural District Councils to put in force the existing building by-laws pending developments in the Government's housing policy has led to the calling in question of the general usefulness of these bodies. It is not necessary to attribute their delinquencies, as some critics have done, to ignorant obstinacy and excessive individualism of the farming class, from which these bodies are largely recruited, in order to prove that they stand in need of reform; but there is no doubt of the unwillingness to apply the by-laws, or of the unsatisfactory condition of affairs that has resulted therefrom. The fact of the matter is that while the Councils are doubtless well posted in the letter of the Housing and Town Planning Act, the spirit and purpose of it are still only dimly understood. For example, there exists in some quarters a quite unholy zeal for the demolition of old cottages which, if repaired, would be better than new ones; and this is accompanied by the practical giving of *carte blanche* to the jerry builder, with the result that we hear of cottages being built under the road level, with inadequate drainage, and without damp courses and other precautions now considered indispensable to health. Local jobbery is doubtless responsible for the "passing" of many a cottage that carries its iniquities on its face. But the jobbery, more often than not, is of that wholly ingenuous kind which might equally well be styled over-trustfulness—in other words, the practice of "taking the builder's word for it" that such and such a rule has been complied with is exceedingly common.

Glasgow Cathedral.

IT is satisfactory, from the art lover's point of view, that the wave of enthusiasm for new and sumptuous buildings that has spread from America to this country is being accompanied here by an unusual solicitude for the preservation of existing historic structures. At the moment it is our cathedrals that give rise to anxiety. For weeks past the foundations of St. Paul's have occupied the public mind to no very obvious advantage; and now it would appear that Glasgow Cathedral is threatened with similar trouble. At any rate, fractures have occurred in the south-east corner of the building adjacent to the old well, and the Board of Works has been empowered by the Glasgow Corporation to sink a trial pit at this spot, in order to determine whether defective foundations are the cause of them. We trust that the cause of the fractures, whatever it may be, will prove to be capable of prompt removal. It was only recently that extensive operations necessitated by the condition of the roof of the cathedral were satisfactorily completed at a cost of something like £15,000, and it would be an unkind turn of the wheel that placed the other extremity of the cathedral in a jeopardy involving a good deal of additional expense.

The Terror of Town Halls.

NOTTINGHAM is badly in need of a town hall, and, as usual, the mean-minded are crying aloud against the wicked extravagance of the proposal to build one. Building, it seems, costs money, and a town hall has to be paid for out of the pocket of the ratepayer. Nottingham, therefore, is naturally in the throes of a rather one-sided controversy, in which all the big battalions seem to be ranged on the side of
parsimony. Most of the arguments of these
economists, however, are distinctly unconvincing.
example: "I need not labour the point beyond ren
ing business men that any commercial traveller
state that Nottingham is the poorest business cen
anything like its size in England." Any comm
or uncommercial traveller, having any real gra
principles, would agree that one of the surest wa
relieving Nottingham's parlous state is to rede
from the appearance of meanness by putting
respectable town hall. We trust that Nottingham
have sufficient wisdom and courage to disregar
croakers and to take this first long stride to
prosperity.

The John Rylands Library Extension.

IT is so seldom that a building that is old enou
need extension is enlarged by the architect
designed it, that a notable instance such as
supplied by the Rylands Library, Manchester, is
recording. Mr. Basil Champneys, who built the li
has prepared sketch plans for an extension which
cost between £50,000 and £60,000, and will cov
area of about 1,182 square yards. Provision is
made for book storage, an additional reading-
a manuscript room, a series of rooms for administ
work, and common rooms for the staff. It is qu
reported that "the extension will harmonise wit
present structure, and be in communication wit
Anyone might have been trusted to secure the
condition without much risk of offending the
tectural proprieties; but the "harmonising" bu
is a more delicate matter. An architect who is
upon to "harmonise" with another man's wor
only do so at considerable sacrifice of his
individuality, with the common result that his w
tame and lifeless; but the Rylands trustees are
congratulated on having Mr. Champneys availa
harmonise with himself. Whether an architect fi
himself, after a considerable lapse of years, in
happy position is apt to discover that he has outg
his own earlier manner, and is to that extent disco
with himself, is a problem that only the late Sir
Gilbert could have worked out quite conclus
Manchester, singularly rich in libraries, should e
ally have as much reason to be as proud of the
Rylands Library as of its contents, which incl
very fine collection of incunabula, or firstlings
printing press, many of them from the famous A
Library collected by Earl Spencer. Manch
several fine libraries, by the way, include w
probably the earliest free library in Englan
Chetham, which was established in 1653.

An Example from Edinburgh.

IT is interesting to be reminded, by the publicat
the thirty-seventh annual report of the Coc
Association, that the London Society has an
lent exemplar in the North; the Cockburn Assoc
being described as an institution "for the preser
of the amenity of Edinburgh and its neighbour
Apparently the Edinburgh association is doing
lent work, and doing it genially and tactfully.
the proprietors of No. 1, Charlotte Square, propo
throw out "a dormer window in the pyrami
behind the sphinx, representations were at once
to them, and were most courteously received, wi
result that the proposal was abandoned, and the
side of Charlotte Square retains its beautiful fe
unblemished." It is clear that the courtesy was
on one side. When the preposterous propos
erecting a huge glass house or alleged winter gar
the Princes Street Gardens was put forwar
Cockburn Association co-operated with the
Scottish Academy and the Edinburgh Archite
Association in sending a deputation to the town c

rotest against this folly. A triple alliance such
is has much more than thrice the impressiveness
single body; and this fact should be borne in
when the London Society finds similar work to
In its endeavours to preserve the amenities of
don, it should seek the support of the architectural
nisations, which, if the cause were commendable,
ld surely not be withheld. Judging from its
nced accounts, one may infer that the Cockburn
ciation is by no means a large or a wealthy
oration; yet it is evidently doing excellent work;
the London Society should not disdain to get into
h with a kindred institution that can show the
mulated experience of thirty-seven years of
etic endeavour.

The Old Houses in Cloth Fair.

eems only too probable that the pre-conflagration
ouses in Cloth Fair will presently disappear.
Jnfortunately the Corporation seems very luke-
, to say the least of it, about the desirability of
rving these vestiges of mediæval domestic
tecture. To the "practical-minded man" they
ly represent so many obstacles to progress, as of
e they are, but what more they are your practical-
ed man can never be brought to see. Moreover,
ondon County Council has sent the Corporation a
urging the preservation of the houses; and as
ing proposed by the Council seems always to be
sed upon principle by the Corporation, the case
onservation seems altogether to be rather hope-
There is a suggestion that the houses, which must
down if the Corporation's widening scheme is
d out, may be erected elsewhere. That would be
r than complete obliteration, although it would rob
ouses of the greater part of their interest, which
sts less in their inherent value as indepen-
units than in their survival where they stand as
Jonson saw them, and where they mark the con-
of a street whose mediæval aspect cannot survive
orporation's widening scheme.

The Popularising of Piranesi.

E more widespread recognition—which we are
happy to know that this journal has done much
to promote—of the genius of Piranesi is exempli-
ather strikingly in a recent issue of the "Bur-
n Magazine," in which Mr. Arthur M. Hind has
interesting notes on the artist and gives a list of
orks. Piranesi's prolificacy of production is no
xtraordinary than his fertility of invention, if
xpression can be justly applied, as we think it
o the inexhaustible permutations and combina-
in which he reproduced Classical details. His
ry of his medium—it has been said of him, sig-
ntly enough, if not very felicitously, that "he
es the etching needle with the same kind of
with which Michelangelo is said to have handled
hisel"—may have arisen from his failure to
r the technique of painting, and consequent re-
on to black-and-white; or it may be that both his
as a painter and his success as an etcher could
aced to the same psychological causes, which
nveniently summed up in the expression that
as born black and white." On the whole, there
on to be grateful that he was wedded to the one
m instead of coquetting with both, a form of
dering that has put many an artist in the half-
d mood of Captain Macheath—"How happy
I be with either, were t'other dear charmer
" Even if he had been successful with colours,
d confined his energies to painting, architecture
have lost immensely by the choice, whether
se it might have diverted him to landscape or
iture, or because, even if he had kept to architec-
his productions must have remained compara-
inaccessible, whereas his working in a reproductive process has enabled its indefinite multiplication and diffusion. As it is, modern photographic processes (which necessarily miss much of the effect which depends upon colour) reproduce the original etchings with entire fidelity, and with no great loss of vigour or brilliancy. Hence, Piranesi has to-day a larger public than he could have imagined even in his most vainglorious moments.

THE PLATES.

Guaranty Trust Building, New York: Main Elevation.

SINCE this plate and that of the Detail of Order illustrate the building of which there is an account in this issue, we need only point out in this column the simplicity and effect of largeness conveyed by the Ionic porticos and the tall windows framed by pilasters. The stone used is Concord granite.

Guaranty Trust Building, New York: Detail of Order.

One should note in this view the use of three-quarter columns, four in number, carrying the entablature, and framing the tall windows of the ground floor. The kind of ironwork employed for the balconies may also be studied.

The Bow Saloon: Buckingham Palace.

Buckingham Palace has undergone drastic alterations since the days of Nash—notably on Queen Victoria's accession and again in 1850, when Blore designed and Grüner decorated what was practically a new building. The coffering of the ceiling, however, in the Bow Saloon suggests the hand of Nash, and the indefinable elegance of the ornament elsewhere is also reminiscent of him.

Blakemore End, Little Wymondley, Stevenage, Herts.

This house and its gardens were designed by Mr. A. Needham Wilson, A.R.I.B.A., of London. It is built of dark-coloured local bricks, the roof being covered with old Cambridge grey tiles. The general contractors were Messrs. J. L. Glancock and Sons, of Bishop's Stortford, the electrical plant was installed by Messrs. Edmondson's Electricity Corporation, Ltd., and patent partitions were put in by Messrs. Ames and Hunter.

Cottingham's Design for Ironwork: Balcony, Railings, Gates, and Capitals.

The designs we publish this week give some idea of the wide range of Cottingham's powers of invention in design. When one considers that he belongs to the epoch of cast-iron, and that all the designs were carried out by this process, one is amazed at the courage of his convictions as to the artistic possibilities of cast-iron. Latter-day practitioners would certainly hesitate before attempting to reproduce such intricate detail as that of Cottingham's capitals by this process.

Guaranty Trust Building, New York: Working Drawing for Façade.

The set of illustrations that we give of this building in the present issue would not be complete without a working drawing, and we accordingly publish one of the main façade—certainly a brilliant example of its straightforward and lucid kind.

Student's Drawing. Design for a Beaux-Arts Exhibition Palace: Detail of Elevation, by Emile Bénard.

We have already published drawings by former students of the Beaux-Arts which seemed to us to be of more than transitory interest, and this design in the Ionic order undoubtedly merits inclusion in this category. The ornament is worked out with extraordinary thoroughness, and the entire design has a grace that allies it with the best traditions of Classic architecture.

HERE AND THERE.

MANY a time, while I have been studying some old piece of craftwork, a Gothic tomb perhaps, a finely panelled mahogany door, or an elaborate ceiling, my cicerone has said: "Ah! they don't do work like that nowadays"—which assumes, of course, that there once was an age quite golden in comparison with our own, so far as these things are concerned—an artistic age, in fact. But was there? The doubt is not raised by me, but by a brilliant man who delighted in upsetting preconceived opinions and cherished beliefs. I have recently come across the passage in which the denial is set forth with much gusto, and as the book is one which may be regarded as unfamiliar to the younger generation, it is worth while to unearth the pronouncement. I take it from Whistler's "Ten O'Clock." "Listen!" he says, "There never was an artistic period. There never was an Art-loving nation. In the beginning, Man went forth each day—some to do battle, some to the chase; others, again, to dig and to delve. . . . Until there was found among them one, differing from the rest, whose pursuits attracted him not, and so be stayed by the tents with the women, and traced strange devices with a burnt stick upon a gourd. This man. . . . this designer of quaint patterns. . . . this dreamer apart, was the first artist. And when, from the field and from afar, there came back the people, they took the gourd—and drank from out of it. And presently there came to this man another—and, in time, others—of like nature. . . . and so they worked together. . . . Presently they went beyond the slovenly suggestion of Nature, and the first vase was born, in beautiful proportion. And the toilers tilled, and were athirst: and the heroes returned from fresh victories, to rejoice and to feast; and all drank alike from the artists' goblets, fashioned cunningly, taking no note the while of the craftsman's pride, and understanding not his glory in his work; drinking at the cup, not from choice, not from a consciousness that it was beautiful, but because, forsooth, there was none other! And time, with more state, brought more capacity for luxury. . . . And the people lived in marvels of art—and ate and drank out of masterpieces—for there was nothing else to eat and drink out of, and no bad building to live in; no article of daily life, of luxury, or of necessity, that had not been handed down from the design of the master, and made by his workmen. And the people questioned not, *and had nothing to say in the matter*. So Greece was in its splendour, and Art reigned supreme—by force of fact, not by election—and there was no meddling from the outsider. The mighty warrior would no more have ventured to offer a design for the temple of Pallas Athene than would the sacred poet have proffered a plan for constructing the catapult. And the Amateur was unknown—and the Dilettante undreamed of! And history wrote on. . . . and the world was flooded with all that was beautiful, until there arose a new class, who discovered the cheap, and foresaw fortune in the facture of the sham. . . . And the artist's occupation was gone, and the manufacturer and the huckster took his place. And now the heroes filled from the jugs and drank from the bowls—with understanding—noting the glare of their new bravery, and taking pride in its worth. And the people—this time—had much to say in the matter—and all were satisfied. And Birmingham and Manchester arose in their might—and Art was relegated to the curiosity shop."

* * * *

No one will gainsay the sparkle of Whistler's little homily, and, if the facts were as stated, we should be obliged to agree with the artist's conclusion, but the whole fabric is built up on a foundation which is very questionable, and certain parts of the argument are in direct opposition to realities. It is well, first of to remember that underlying the whole of Whistl diatribes was a feeling of irritation at the "outsid having the blatant audacity to make any critic at all. The dictum was, that nobody but an ar was in a position to criticise an artist's work position that has been wrangled over times with number, and, as far as I can see, with the result the outside critic has been able to make out a be case for himself than the artist can. To take a leaf of M. Rostand's book, it is like the hen declaring no one who cannot lay an egg is in a position to whether it is a good or a bad egg. Much of Whistl vituperation was the outcome of a vicious antipa to the cult promulgated by Ruskin, Morris, others of the same school. For my own part, I th that it is just as easy to develop a theory opposit Whistler's, as to get up one in support of his; eas indeed, because there are more facts to support it. man who made the first efforts at decorating a go with a burnt stick probably got patted on the back his work, and was esteemed a clever fellow, and praise he won was no doubt a great incentive for to develop his new-found art. Pericles certa may not have proffered any design for an Athen temple, and K. of K. might claim equal virtue for thrusting on the architect his own sketch for the K Edward Memorial, but we must not forget Michael Angelo took a big share in the design of fo fications, and that Da Vinci made wonderful sketc of military engines and possible flying machines. sides, the advent of the outsider was not a set-back a decided gain. The art amateur became the pat and there is no denying the great impetus which patron gave to the development of art in many peri as witness Lorenzo the Magnificent, Louis XIV., even the rather despised Earl of Burlington. My view is that there certainly were artistic periods artistic people, both products of conditions w fostered the development of art. As Profe Lethaby has said: "A wide view of history mak evident that periods of art have coincided with crests of general development. Where we have other chronicle it is safe to argue from the existenc a school of art to a period of culture of whic was the outcome." Though art for art's has been pushed for all it is worth as an axiom, the artist has been put forward as a man who things for the sheer delight he himself gets out o labour, history makes it very clear that this hermit theory does not turn out well. The artist, in must have a public of some sort, whether it be a se circle of friends and admirers, or a nation. And development of the one is wrapped up in the appre tion of the other; or, if not in the appreciation, the the depreciation of the other. Whistler had a g gift, and, alike with his brush, his needle, and pen, he carried on a splendid warfare aga the Philistines of his period, but if ever there w self-conscious artist he was one, and the desire public applause, in the guise of Fame, drew him on the rest.

* * * *

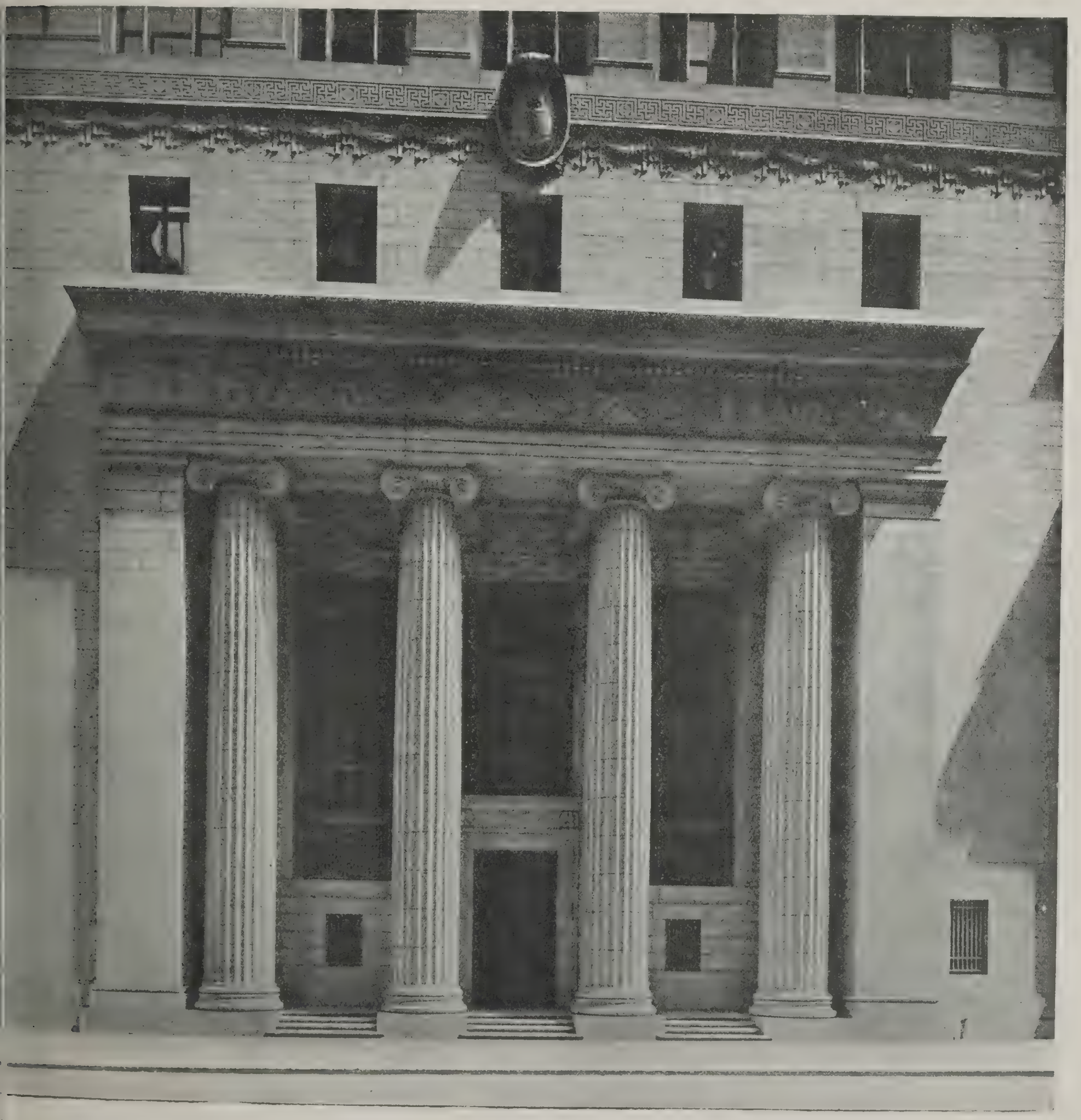
Some writers have spent a good deal of tim trying to show us how the mediæval workman wro his stone and his wood with loving care, to the s accompaniment of saintly thought and fervent pra It is more than probable, however, that the men carved our cathedral images spoke as much in the nacular as the British workman does to-day, and when the carver miscued on the head of St. Matt he did not utter a *Pater Noster*, but relieved his ings in robust English.

UBIQU

A GREAT AMERICAN BUILDING.

New York City there has recently been completed
or the Guaranty Trust Company a building which
anks as one of the biggest achievements even in
ity where big achievements multiply at a
omenal rate. The architects, Messrs. York and
yer, had to solve a somewhat exceptional problem.
r patrons required a banking structure sufficiently
to accommodate not merely the gigantic staff
perations involved in the Trust's present business,
o provide what they calculate will be the necessary
city in fifteen or twenty years' time. These necessi-
overned the designing, planning, and construction
he huge building, exterior and interior. At
nt, of course, a large portion of the premises is
equired by the Trust, and this is being leased to
us other business concerns.
ne of the most remarkable features of the under-
g is the speed at which it has been carried out;
s finished exactly a year from the date of the
first drawings—finished, that is, in every detail of structure, ornament, and decoration. We do not propose in this article, for the material of which we are indebted to the American "Architectural Review," to give more than a general observation of the building and its multitudinous rooms, the character of which can be gleaned from the illustrations here and among this week's Plates. It would require too much space to do justice to the elaborate decorative work in bronze and marble that has gone to the beautifying of this most sumptuous of office structures.

For the exterior, grey Concord granite has been employed, and it may be said that the essential simplicity and dignity, the "scale" of the order, and the treatment of its ornament are all suited to the material. The main banking-room is 93 ft. by 135 ft., and 52 ft. high, with three entrances from three streets. The floors are of silver-grey Knoxville, with an inlay of narrow bands of mosaic in black and other variegated

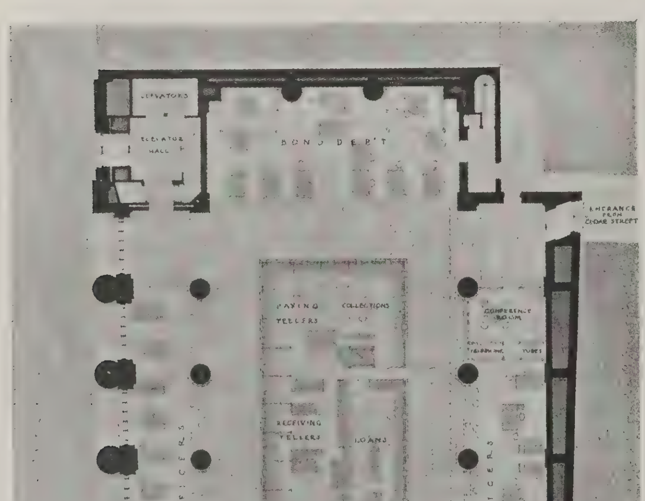


BUILDING FOR THE GUARANTY TRUST COMPANY, BROADWAY, NEW YORK: DETAIL OF FAÇADE.
YORK AND SAWYER, ARCHITECTS.

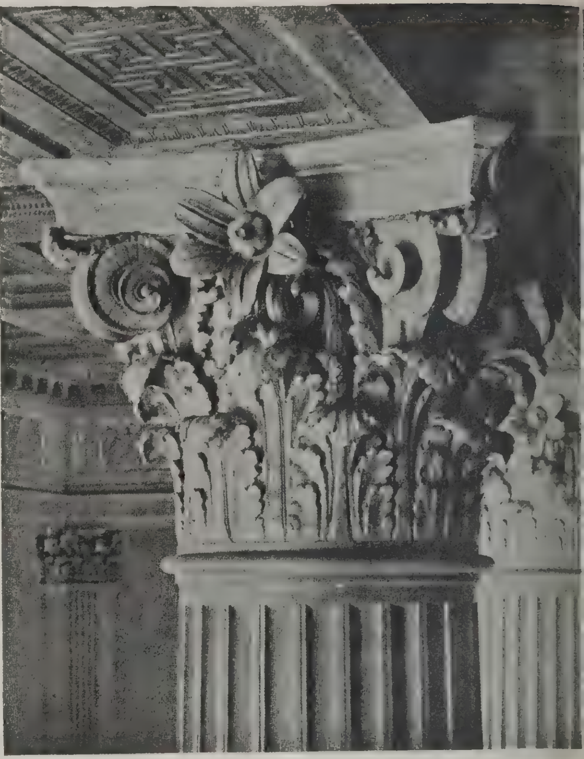
dark marbles. Walls, columns, counter-screens, etc., are of Hauteville marble, with the frieze a successful imitation of the same material. The ceiling is plastered, with the main body-colour matching the marble in general tone, but of a lighter shade; the ceiling ornament being pricked out with dull gold, and the background of the coffered panels filled with a rich, dull blue. Here, as in other departments, great care has been taken in the selection of harmonious furniture. The rugs are of neutral tones, and the furniture of Italian walnut, with steel bodies for much of the working furniture. The colour note of the room, however, is the soft buff of the Hauteville marble of the walls and counters—the latter surmounted by a bronze grille of a subdued golden colour, with a slightly greenish patina on the modelled surfaces.

Above the main banking-floor are two other important banking-rooms—the Foreign Exchange and Trust Departments, on the second and third floors respectively, fitted and decorated in a similar way to the main banking-room already described. The directors' room has wainscot and beam ceiling of Italian walnut, with Siena marble architraves, mantels, and floors, the latter inlaid with a border of black mosaic. The walls are covered with a rich stuff harmonising with the walnut. The president's room and smaller committee room are similarly treated. In the offices the floors are of cement, with marble base and metal trimmings; while the basement, the toilet rooms, minor corridors, etc., have wainscots of the grey Knoxville.

The remainder of the premises consists of dining-rooms and kitchens for men and women employees; lounging and reading-room; the bank's own printing establishment; photographing, mimeographing, and duplicating departments; registration, auditing, credit, bond, and publicity departments; a private telephone station and telegraph office; even its own incinerator. The basements contain enormous vaults, of two storeys, entirely surrounded by passage ways, and enclosed in three complete cages (over 30,000 ft alarm wires, set one inch apart through the conc wall. An ingenious arrangement here is a serie reflecting mirrors which makes it possible to directly across underneath the lower vault storey that any attempt to tunnel into the building from b could be instantly detected. The sub-basemen cellar floors contain elaborate ventilating, humidif and air-cleansing system; with an independent vac steam-heating equipment and a pneumatic double service, with a basement central station. These de give some idea of what had to be provided for in planning. It may be mentioned, in conclusion, all doors throughout the building are bronze, an of the windows of the upper storeys have iron fr filled with metal-covered sashes.



GROUND-FLOOR PLAN.



BUILDING FOR GUARANTY TRUST COMPANY, NEW YO
CAPITAL FROM INTERNAL ORDER.

*** As in future the illustrations in this journa the majority of cases, will be from photograph buildings, the Editors invite architects to submit ph graphs of their recent work. When the illustrat are given as full-page plates twenty-five copies or paper will be sent to the authors.

For convenience in filing them for future refere a special portfolio for the plates has been prepa All readers having, or placing, a standing order a newsagent to supply the JOURNAL each week twelve months can secure one of these portfolios of all cost, by sending in an application to our offic Caxton House, Westminster. Extra portfolios each.

The demand for these portfolios has been alread extensive that our publishers have had some diffic in keeping pace with it; but orders are being atte to in strict rotation, and without undue delay. evident that the system which we have initiate publishing with each issue a number of loose pl and of providing the means of filing them in class series, has widely commended itself as affordin excellent method of forming a valuable collectio architectural examples.

CORRESPONDENCE.

;ditors disclaim all responsibility for the statements made or opinions ;sed by correspondents, who are asked to be brief, and to write on one side only of the paper.

Hoop-iron in Footings.

he Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

RS,—I observed at the pulling down of old King's ;ge Hospital that hoop-iron had been used in the ngs. No difficulty was experienced in getting this for it was sufficiently perished to break off with a turn and slight pull of the workman's hand. It ared to me to be conclusive evidence that hoop-bond is of but little use. If the cement in which ıoop-iron is bedded is quite impervious to damp, perhaps it will not perish, but used in footings it is ;ely that it will remain dry. Time, I suppose, ; can show this, but I shall be glad if any of your ;rs can throw any light on the subject.

R. W. COLLIER.

The Problem of Daylight Illumination.

he Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

RS,—In your interesting extracts from Mr. ıram's lecture, I see he is credited with saying there is "no recognised criterion" for lighting, ıgst other buildings, schools; and, that "practi- no rules exist." In "School-Planning" will be ı seventeen such rules.

th regard to skylights in schools, such have always passed for central halls with ridge-ventilation for corridors. High dormers have also been ıently passed, and have, in fact, been added to sent in without them.

Mr. Waldram will work out the exact effect of bilateral *equal* lighting in classrooms and bilateral *partial* lighting on a comparative basis, he will further add to his laurels. Continental opinion is against the former, because of the shadows cast. A long series of eyesight tests will have to be undertaken to make sure of the effect on the scholars of these bilaterally lit schools.

I should add that the real reason of the objection to skylights in classrooms by the Board of Education is that they cause draughts, by the cold condensation of air under them, and that they are very hot in summer in certain situations. It is not on the score of light *quâ* light.

P. A. ROBSON.

[A letter calling attention to the seventeen rules given on pages 8 and 9 of Mr. Robson's "School-Planning" has been also received from the publisher, Mr. J. Nicholson-Smith.—EDS. A and B.J.]

Cheap Cottages.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—With reference to your recent excellent Edition-de-Luxe, I think that perhaps some of your readers will be interested in the enclosed plan of a cottage I am now having built at Merrow Common.

The contract price was £107 10s. 8d.

This included drainage, water supply, picture rails, steam outlet to copper, etc.

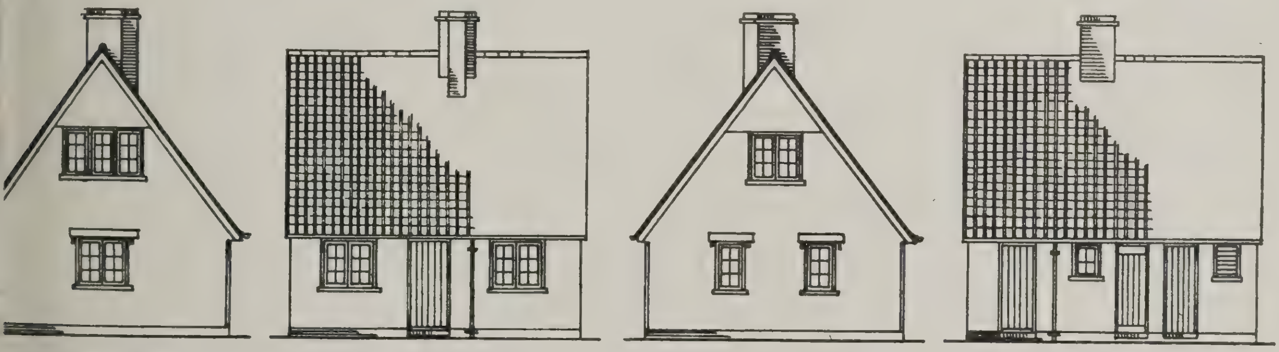
The foundations are of brickwork in cement, and the walls of framing covered externally with felt and weatherboard stained with solignum and plastered internally.

The roof is covered with Somerset patent tiles.

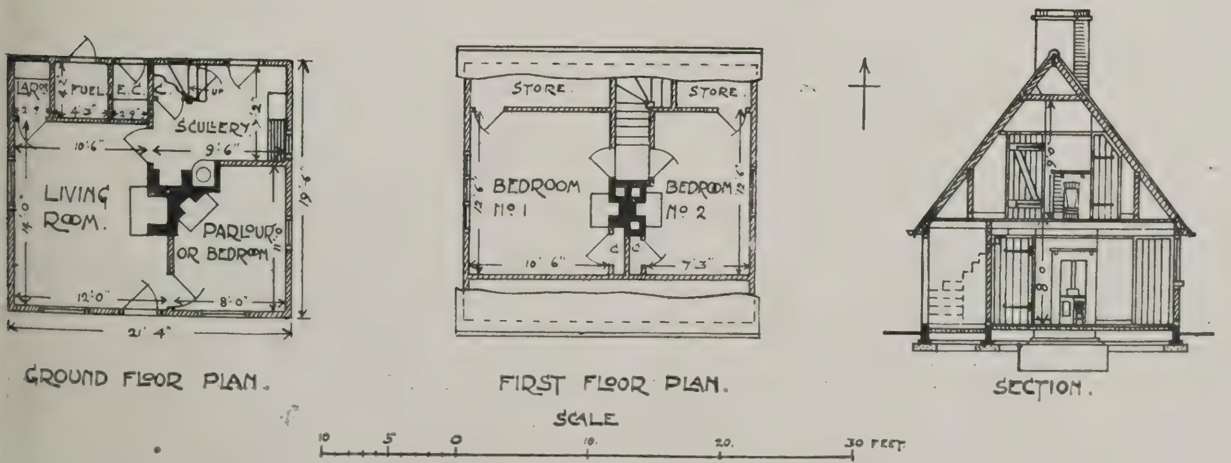
All floors, except scullery, etc., are boarded.

If the walls had been of brickwork—9 in. by 4½ in.—roughcoated, the cost would have been £120.

CONRAD B. WILLCOCKS.



W ELEVATION. S. ELEVATION E. ELEVATION. N. ELEVATION.



GROUND FLOOR PLAN. FIRST FLOOR PLAN. SECTION.

CHEAP COTTAGE AT MERROW COMMON, SURREY. CONRAD B. WILLCOCKS, ARCHITECT.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

TESTIMONIES OF STUDY SUBMITTED FOR FINAL EXAMINATION.

BY A FELLOW OF THE INSTITUTE.

The results of the policy of the Board of Architectural Education, towards the promotion of healthy competition between the various schools of architecture, has lately been evidenced by an assemblage of works almost rivalling the present exhibition of Institute competition drawings. The design subjects, a lighthouse and a golf club, provided scope for both monumental and domestic interest, and the attention given to each is a sign of the awakened efforts in design among the younger men.

Referring to the designs evolved for the lighthouse subject, many fine schemes are marred by an exuberance of detail, out of scale and sympathy with the character of the intended structure. One looks in vain for the rich simplicity which is the chief attribute of such buildings as Smeaton's Eddystone on Plymouth Hoe, Rennie's breakwater lights at Ramsgate or Kingstown, the South Stack at Holyhead, the fine tower at the North Foreland, and many others, representing the tradition of this form of marine engineering. Students are often led away to design architecture on paper which would not be so pleasing in execution. Redundancy in the multiplicity of details and rich ornament should be discouraged in favour of dignified mass.

Two of the submitted designs approach very closely to the traditional form. They are Nos. 28 and 29. At first sight these designs did not attract, but close enquiry revealed the restraint exercised, as well as the beauty of the suggested detail. Another point seems to have escaped attention. Too many accessory features have been designed at the base-line of some of the suggested structures, in a position where the architecture would soon be destroyed by the action of the sea. Had more time been given to looking up authorities on the subject, the fine system of masonry employed continuously and exclusively for three centuries would have been better understood. Many of the designs place the tower in a position that is constructionally wrong. Some show a tunnel landing-place beneath the base of the tower itself which would in time become dangerous and lead to the rapid undermining of the foundations. Others show a nice study of the mechanical attributes, and frame their designs with gold lines a quarter of an inch thick. No. 42, from the Liverpool School of Architecture, is a fine rendering of the subject, well detailed and presented. No. 1 recalls a magnificent design by the American architect Magonigle. No. 15 is a design showing a good knowledge of Classic detail, and No. 14 is a familiar French *motif*.

No. 11, from the Liverpool School of Architecture, is a design of great power and appropriate character, the detail being exceptionally good.

No. 46, from the Architectural Association, is indicative of the new *régime* in progress. The twin lights are reminiscent of the Memnon of the Nile, the colossi, whom, tradition asserted, gave forth a bell-like cry at the dawn. Nos. 8, 5, 46, 47, and 32 are distinguished by fine scale.

Golf Club Designs.

In this subject the standard of the work is high, but many of the designs are devoid of the character one conceives as suitable to buildings of this class. Briefly there are two distinct camps. One represents the domestic type, emulative of Mr. Lutyens's style, and the other hints of Italian and French types. Certain of the sets reveal a deplorable lack of training on the part of the authors.

No. 70 is a gabled sixteenth century dower house, which ought to answer very well as a golf club for ladies if furnished to the period and decked with old-world needlework, but it fails to satisfy as a modern type. No. 69 is of Colonial origin, well-planned, but lacking distinctive charm. No. 26 follows the picturesque domestic style of Mr. Lutyens. No. 72 is beautifully detailed, and recalls the 1820 period of English architecture. No. 51 shows a broad and dignified handling of the problem, and partially realises the correct character this type of building should possess. No. 12 is a quiet brick design of forceful charm. The author of No. 25 is evidently enamoured of the profile of the Assyrian mounds, judging from the monotonous skyline he has adopted. No. 83 has much to learn in regard to the theory of beauty in the form of a plan. No. 75 has achieved a very broad scheme; the businesslike detail shows that the practical side has received consideration. In composition, the elevation designed by No. 4 is very charmingly grouped, but the idea is somewhat complex. No. 71 is an attempt to revive the type of club-house which was the fashion twenty years ago; in addition to a Doric Colonnade of the present mode, No. 23 has too much of a public institution in its facial expression; while No. 14 is a fair design. A very refined and quiet treatment is that submitted by No. 59, with a simple iron treillage veranda; this scheme, which emanates from Liverpool, without doubt provides the best solution of the problem. No. 39 is a well-considered composition, with effective details. The author of No. 8 is to be congratulated on his adaptation of an Italian *motif*.

All the leading schools are represented including the Liverpool School of Architecture, the pioneer of the Academic movement, the Atelier, the Architectural Association, University College, and the Royal Academy Schools.

The names corresponding to the numbers mentioned in the foregoing article are as follows:

Design for a Lighthouse.

1. F. A. Addey.
5. G. W. Callander.
8. L. E. Carreras.
11. G. Davidson.
14. J. Dickinson.
15. H. Dicksee.
28. G. A. Langdell.
29. H. G. Leigh.
32. R. H. Philps.
42. F. Williamson.
46. R. S. Wallace.
47. N. B. Weekes.

Design for a Golf Club House.

4. W. Allinson.
8. A. M. Barrowcliff.
12. D. C. Campbell.
14. R. Cawkwell.
23. L. Dotto.
25. J. Dickinson.
26. V. Dyson.
39. T. T. Jenkins.
51. W. F. Pennington.
59. T. A. Sanders.
69. B. R. Shibley.
70. W. E. W. Terrell.
71. A. Thorpe.
72. R. A. Threadgold.
75. D. W. Walker.
83. J. F. Wilson.

R.I.B.A. Problems in Design.

The students of Liverpool University and the Architectural Association School who qualified for the Final Examination of the Royal Institute of British Architects were as follows:

Liverpool University.—A. E. Davidson, S. B. Howard, E. C. Preston, N. B. Weekes, G. Davidson, F. Williamson, J. Blackford, A. L. Dotto, T. A. Sanders, R. A. Threadgold, T. T. Jenkins, and W. F. Pennington.

Architectural Association School.—F. A. Addey, G. W. Callander, E. C. Davies, N. S. Robinson, H. Bagenal, A. S. Burnett, R. A. Duncan, A. F. Hooper, R. H. Philp, A. Silcock, and R. S. Wallace.

SOME NOTES ON GREEK ARCHITECTURE.*

BY PROFESSOR W. R. LETHABY, F.R.I

In these notes I am going to talk on,
round about, three famous monum
which are preserved in the Br
Museum—the doorway of the "Trea
of Atreus" (so called), the early I
Temple at Ephesus, and the Mausol
of Halicarnassus.

One of my objects in doing this i
commend to you each severally the
of taking up the study of special build
about which you shall decide to know
that may be known. Directly you go
yond the generalities of the compre
sive histories you will usually find it
easy to make yourself a specialist on
selected building. Amongst those whi
have seized as my very own are the t
buildings which I have named, and
study has been very amusing. The
something of romance in noticing
points regarding these world-wor
which may perhaps never have
explained since the workmen left th
To give a little example, if I may.
will know that it has been much ar
whether the sculptures of the Parth
were painted. There is plenty of
dence that the backgrounds of the re
were painted blue and red. and that
architectural members had patterns,
all beyond that was uncertain. I ma
careful search for traces, and at last f
two eye-pupils which had been pai
one being that of the eye of Selene's
horse from the pediment, and an
being the pupil of the eye of a hors
the frieze.

The Treasury of Atreus.

The remarkable doorway of the
called Treasury of Atreus at Mycen
the most complete specimen of
Hellenic or Ægean architecture in
museum. It may be dated about 120
You will remember that it has col
flanking the opening which are l
above than below. Ægean columns
generally in wood, and it is ent
reasonable in wooden structures to
the posts bigger above where other tin
are framed into them, and smaller
where they rest on a stone base. I wa
terested last summer to see the same t
ing applied to the wooden posts of
shire cart-sheds. In the British Mu
restoration it is suggested that certai
marble slabs decorated with band
spirals cased the wall surfaces at the
of the triangular relieving space abov
lintel. I gave some reasons once b
why these slabs must be accepted a
filling of the space itself, and I will
add two more. These slabs have
holes in their beds. They were
pinned together to form a sort of sc
and they were not cramped to a wal
hind them. Again, in Dörpfeld's re
tion of tomb II. at Mycenæ, illustrat
Perrot and Chipiez, he shows the
gular relieving space filled with si
spiral-work. Whatever evidence he
it is most unsafe to differ from the
German expert. I should like to su
to one of you to make a revised resto
of our wonderful doorway. I may
mention a point which I think is i
fectly understood regarding the con
tion of vaulted tombs either round lik
"Treasury of Atreus," or square lik

---

* Extracts from a lecture given before the
tectural Association on Monday, February 2.

tly discovered by Sir A. Evans in
. These tombs were built in exca-
ns in the side of a hill or covered with
und of earth. Now, the building of
nry which contracts in the form of a
in a pit is quite different from the
em of doing it in the air. Not only
you all the abutment that is wanted,
y packing the space between the lean-
asonry as it goes up and the side of
it you can weight the tails of the
so that they won't fall inwards. In
uare stone-covered tomb in Crete de-
d by Sir A. Evans the stones of the
g roof were long and their beds actu-
leclined outwards. When you con-
the packing at the back you will see
a good expedient this was. Doubt-
e same sloping beds were continued
the space became contracted enough
mplete it with couples of leaning
.

Ægean Art and Greek Origins.

ent publications by the German
ological Institute show remarkable
obtained by an extremely careful
nation of the traces of painting or
astered walls and floors at the Palace
yns. The fragmentary evidence has
combined in a wonderful way, which
l be a lesson to us in method and re-
precision. The walls were painted
brightest colours, with scenes like
sions and the hunting of beasts, and
great variety of pattern-work. In
l cases the dadoes showed remark-
ccurate and vigorous imitation of
marble slab-work, and this imita-
ust show that polished coloured wall
were already in use, for where the
on is there also must the original
een. The doorway of the Treasury
reus shows similar liking for the
osition of coloured stones, for, while
in structure was of a light greenish-
the triangular tympanum was filled
abs of red marble ornamented with
f spiral patterns. At tomb II. the
over the door was of "leek-green
." The plastered floors at Tiryns
lso painted; frequently they were
l up into squares something like a
oard, with some simple subject in
Some of these designs show an in-
to make the floor recall the sea,
s a whole, they are so much like
osaic floors that it seems as if there
ave been some link of connection.

rthur Evans found a great number
ilar wall paintings at Knossos.
g must have been the primary art
pre-Hellenic age in Greece, and the
form was doubtless pottery paint-
which, at this great time, most ex-
works were executed.

decoration of the doorway of the
ry of Atreus is in bands of spirals
ly disposed on the surface of the
rk, and there were other bands
into alternate panel and vertical-
rrangements. Both were derived
he painted pottery which is the
source of such banded decoration,
of the spiral formed by a twirl of
sh. The panel and vertical-strip
ion coalesced with a natural mode
ruction by the use of alternate slabs
ts, and a great number of examples
n Crete show certainly that this was
gin of the metope and triglyph.
ainted bands, then stone dadoes,
ternate borders, then metope and
; thus was the Doric frieze
ed. The sculptured Ionic frieze
to have had a similar
In this connection two re-
le stones from Mycenæ, at the
British Museum, which have not received the attention they deserve, must be mentioned. They are fragments of slabs which had oxen well carved on them. The reliefs covered two courses, which, together, were about 4 ft. 6 in. high. A German scholar who showed that they belonged to a band of sculpture called it the "oxen-frieze," but the band was really an oxen dado. We must get it into our minds that the slab dado was perhaps the most characteristic feature in Ægean building work. It probably arose from the use of crude brick concurrently with easy access to gypsum, from which large slabs to protect the lower parts of the walls could be easily cut. The sculptured dado gradually crept up the wall and became a frieze.

In the Ægean age it was customary to mark that which was sacred with what have been named "Horns of Consecration." I have no doubt that the very curious lyre-shaped finials, which we call acroteria, set on the apexes of the pediments of Greek temples, were survivals of these horns.

Origin of Mouldings.

Ægean art again illustrates quite clearly the origins of architectural mouldings. Just as the painted subject tended to become a sculptured relief, which was completed by painting, so the painted band of spirals led up to the carved bands of spirals of the doorway at Mycenæ. Further, I believe it will be found that a large class of mouldings arose as bands of hollows and projections imitating the painted bands which are so universal on early pottery. Relief sculpture, pattern work, and moulding are thus for the most part echoes of painting. Besides this imitative source for minor moulded work, there are three main conditions in structure for the larger mouldings and orders of mouldings. First, there is the recessing into a retiring series, as around a doorway; secondly, the projecting capping forming a protective shelter; thirdly, rounding as for a column and the great echinus of its capital. This conception of moulding, as founded on certain large structural forms, with added minor shadings, should be helpful to the modern designer who considers principles.

The Ionic and Doric Orders.

The Ionic column must, I think, have been developed as a free-standing pillar. The wide-spreading foundation of its base suggests this, and some of the very earliest examples known were isolated pillars bearing sculptures, as those lately found at Delphi and Ægina. Then we find that Ionic pillars were from an early time used as goal-posts in the circus, and also to mark another goal—the grave. It is remarkable that in one or two Ægean works of art representing contests a pillar appears in the background.

The Ionic column, I do not doubt, was developed from such goal-posts. In the finished order the column has a base in three separate courses—a square block, a circular block, and a rounded or inverted bowl-shaped block—the torus.

It is now generally accepted that the Doric Order was developed from Ægean architecture. It has been said that the metope and triglyph frieze is an adaptation of Ægean dado construction. I have never, however, seen any really satisfactory explanation of the guttæ, or drops, beneath the triglyphs of the Doric frieze, and I venture to put forward one possibility which has lately occurred to me. In modern Switzerland it is customary to shield the ends of projecting beams with a piece of board nailed up against its end section. The bottom edge of this shield piece is cut into several notches, so that the water may the better form into drops and fall. Frequently these casing pieces have five or six such "drops" of a dove-tail form, just exactly like guttæ. Now, as much Greek building was in timber, and, as like causes often bring forth like results, it seems to me quite possible that Greek guttæ originated in such a custom. Vitruvius says that triglyphs did represent the ends of wooden beams.

We now know enough of this Ægean architecture to see quite clearly that our gateway from Mycenæ is not an abnormal curiosity but an example of a fine, highly developed, and widespread art, intermediate between the early architecture of Egypt and that of Greece. It is no rude stone monument, but a refined piece of true architecture. The great door is nearly 18 ft. high to the lintel and 30 ft. to the apex of the polished red marble tympanum above it. The eyes of the carved spirals were set with blue-glass studs, and bronze adornments were fixed to the lintel. The domed interior, which was nearly 50 ft. across and as much high, was thickly studded all over the surface with bronze rosettes or stars.

The Archaic Temple of Ephesus.

Leaving these origins, we must now jump over 600 or 700 years to the beginning of the great period of Greek architecture. The example is the temple built by Crœsus at Ephesus, the existing fragments of which are housed in the British Museum. It was being built about 560 B.C. and was a great Ionic structure of the same size on plan as the later temple. It had several remarkable features, such as curious Ionic capitals and groups of shallow mouldings on the bases, and, above all, sculptures on the lowest drums of its columns. I believe that these last are, in fact, a version of the Ægean sculptured dado. In the basement of the Museum are three or four broken fragments, brought from the site of the temple, of two sculptured oxen attached to solid blocks. Doctor Murray thought that they must have belonged to capitals, but six or seven years ago I came to the conclusion that they represented what I will call dado blocks to the antæ of the portico. The scale would allow them to range with the lowest drum of the columns, and the Assyrian bulls furnish an apt analogy for the combination with square blocks.

The whole portico of this temple of Ephesus was a wonderful thing; it was not a mere single or double row of columns, but a double row of eight columns stood in front of an open columnar hall—a vast porch of columns. This arrangement is essentially Asiatic. The central opening was enormous—28 ft. 6 in. Its beam, as has been remarked by Mr. Dinsmore, was the greatest stone in Greek architecture. It is impossible to think that there was more than one of these; that would be an anti-climax. The back end of this temple must have had an extra column, as has been found to have been the case at Samos, and all the inner beams and ceilings of the porticoes must have been of wood.

Professor Lethaby had intended to conclude with an account of the Mausoleum, but time did not admit of more than a brief reference.

A vote of thanks to Professor Lethaby was proposed by Mr. Gerald Horsley, seconded by Mr. Winton Newman, and supported by Mr. Theodore Fyfe, Mr. C. F. A. Voysey, Mr. W. E. Newton, Mr. G. Leonard Elkington, and Mr. Maurice E. Webb.

LOADS ON TIMBER BEAMS.

(2ND ARTICLE.)

BY HUGH S. CREGEEN, A.M.I.C.E., P.A.S.I.

In the issue for November 15, 1911, of THE ARCHITECTS' AND BUILDERS' JOURNAL, an article was included giving tables and a graphical diagram enabling anyone readily to find the safe loading on a square timber of any given size, for spans ranging from 3 to 23 ft. I now give a similar table for rectangular fir beams of various sizes, including many of those commonly met with in building operations. The sizes range from 3 in. × 2 in. to 14 in. × 6 in., and the calculations are based on the assumption that no beam is in depth less than 1/20th of the span.

The formula made use of is that given by

$$B\,M = M\,R$$

B M being the Bending Moment for a beam supported at both ends with a distributed loading, and M R or Moment of Resistance being stated thus:

$$\frac{\frac{b\,d^3}{12}\cdot f}{y}$$

where b = breadth in inches
d = depth in inches
y = half depth of beam
f = permissible safe stress in tons per square inch.

The Bending Moment as given for a distributed load is:

$$\frac{w\,l}{8}$$

Where w = load in tons
l = span in inches.

Fir has been taken, as being the kind of timber in commonest use, with an ultimate strength of 5 tons per square inch and a factor of safety of 10, thus making allowance for loads of a vibratory character.

If a single concentrated load only is required in the centre of any beam, instead of a distributed one, the formula to be substituted will be

$$\frac{w\,l}{4} = M\,R$$

the resultant single load then only being half that which the given beam would carry, equally distributed throughout its length.

In the table given the weights of the beams themselves have not been taken into consideration, and they must therefore be allowed for.

In a similar way from the equation B M = M R, the strength of a beam of any section may be determined if the Moment of Resistance is first found. For circular sections this would be given by:

$$M\,R = Z\,f\ (Z = \text{Modulus of Section})$$

$$\text{or } M\,R = \frac{I}{Y}\,f$$

I = the Moment of Inertia or Second Moment about the neutral axis.
Y = the distance of the outermost fibres from the neutral axis or in a symmetrical figure = the half depth.
f = safe stress per square inch = ·5 tons.

For round circular sections I will

$$\frac{\pi\,D^4}{64}$$

Where π = 3·1416
D = Diameter in inches.
Y = Half diameter.
f = Safe stress as above.

The last formulæ may be found in dealing with structures of a tem nature, such as scaffolding or other in which round poles are made use

No graphical diagram is given present article, as the large num lines representing the load curves on such a small scale, tend to be c ing, but from the table given, this di can easily be plotted on squared pa a similar way to the one given preceding article; and if drawn to a scale, it may be found of assistan ready reference in the drawing offic

Safe Distributed Loads in Tons for given Scantlings.

Span in feet.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
3 by 2 ...	·33	·25	·2																		
4 by 2 ...	·59	·44	·35	·29																	
4 by 3 ...	·88	·66	·53	·44																	
5 by 2 ...	·92	·69	·55	·46	·39	·34															
5 by 3 ...	1·38	1·04	·83	·69	·59	·52															
5 by 4 ...	1·85	1·38	1·11	·92	·79	·68															
6 by 2 ...	1·33	1·0	·8	·66	·57	·5	·44	·4													
6 by 3 ...	—	1·5	1·2	1·0	·85	·75	·66	·6													
6 by 4 ...	—	2·04	1·6	1·33	1·13	1·0	·88	·8													
6 by 5 ...	—	2·5	2·0	1·66	1·42	1·25	1·11	1·0													
7 by 2 ...	—	1·36	1·08	·90	·77	·68	·60	·54	·49	·45											
7 by 3 ...	—	2·04	1·63	1·36	1·16	1·02	·90	·81	·74	·66											
7 by 4 ...	—	2·72	2·17	1·81	1·55	1·36	1·2	1·08	·98	·90											
7 by 5 ...	—	3·4	2·72	2·26	1·94	1·7	1·51	1·36	1·23	1·13											
7 by 6 ...	—	4·08	3·26	2·72	2·33	2·04	1·81	1·63	1·48	1·36											
8 by 2 ...	—	1·77	1·42	1·18	1·01	·83	·78	·71	·64	·59	·54										
8 by 3 ...	—	2·66	2·13	1·77	1·52	1·33	1·18	1·06	·96	·88	·82										
8 by 4 ...	—	3·55	2·84	2·37	2·03	1·77	1·58	1·42	1·29	1·18	1·09										
8 by 5 ...	—	4·44	3·55	2·96	2·53	2·22	1·97	1·77	1·61	1·48	1·36										
8 by 6 ...	—	5·33	4·26	3·55	3·04	2·66	2·37	2·13	1·93	1·77	1·64										
8 by 7 ...	—	6·22	4·97	4·14	3·55	3·11	2·76	2·48	2·26	2·07	1·91										
9 by 2 ...	—	2·25	1·8	1·5	1·28	1·12	1·0	·9	·81	·75	·69	·64	·6								
9 by 3 ...	—	3·37	2·7	2·25	1·92	1·68	1·5	1·35	1·22	1·12	1·03	·96	·9								
9 by 4 ...	—	4·5	3·6	3·0	2·57	2·25	2·0	1·8	1·63	1·5	1·38	1·28	1·2								
9 by 5 ...	—	5·62	4·5	3·75	3·21	2·81	2·5	2·25	2·04	1·87	1·73	1·60	1·5								
9 by 6 ...	—	6·75	5·4	4·5	3·85	3·37	3·0	2·7	2·45	2·25	2·07	1·92	1·8								
9 by 7 ...	—	7·95	6·36	5·3	4·54	3·97	3·53	3·18	2·89	2·65	2·44	2·27	2·12								
9 by 8 ...	—	9·0	7·2	6·0	5·14	4·5	4·0	3·6	3·27	3·0	2·76	2·57	2·4								
10 by 2 ...	—	2·77	2·22	1·85	1·58	1·38	1·23	1·11	1·0	·92	·85	·79	·74	·69							
10 by 3 ...	—	4·16	3·33	2·77	2·38	2·08	1·85	1·66	1·51	1·38	1·28	1·19	1·11	1·04							
10 by 4 ...	—	5·55	4·44	3·7	3·17	2·77	2·46	2·22	2·01	1·85	1·7	1·58	1·48	1·38							
10 by 5 ...	—	6·94	5·55	4·62	3·96	3·47	3·08	2·77	2·52	2·31	2·13	1·98	1·85	1·73							
10 by 6 ...	—	8·33	6·66	5·55	4·76	4·16	3·70	3·33	3·03	2·77	2·56	2·38	2·22	2·08							
10 by 7 ...	—	9·72	7·77	6·48	5·55	4·86	4·32	3·88	3·53	3·24	2·99	2·77	2·59	2·43							
10 by 8 ...	—	11·1	8·88	7·4	6·34	5·55	4·93	4·44	4·03	3·70	3·41	3·17	2·96	2·77							
10 by 9 ...	—	12·5	10·0	8·33	7·14	6·25	5·55	5·0	4·54	4·16	3·84	3·57	3·33	3·12							
11 by 2 ...	—	3·36	2·68	2·24	1·92	1·68	1·49	1·34	1·22	1·12	1·03	·96	·89	·84	·79	·74					
11 by 3 ...	—	5·04	4·03	3·36	2·88	2·52	2·24	2·01	1·83	1·67	1·55	1·44	1·34	1·26	1·18	1·12					
11 by 4 ...	—	6·72	5·37	4·48	3·84	3·36	2·98	2·68	2·44	2·24	2·06	1·92	1·79	1·67	1·58	1·49					
11 by 5 ...	—	8·4	6·0	5·6	4·8	4·2	3·73	3·36	3·05	2·8	2·58	2·4	2·24	2·10	1·97	1·86					
11 by 6 ...	—	10·08	8·06	6·72	5·76	5·04	4·48	4·03	3·66	3·36	3·10	2·88	2·68	2·52	2·37	2·24					
11 by 7 ...	—	11·76	9·41	7·84	6·72	5·88	5·22	4·7	4·27	3·92	3·61	3·36	3·13	2·93	2·76	2·61					
11 by 8 ...	—	13·44	10·75	8·96	7·68	6·72	5·97	5·37	4·88	4·48	4·13	3·84	3·58	3·36	3·16	2·98					
11 by 9 ...	—	15·12	12·10	10·8	8·64	7·56	6·72	6·05	5·5	5·04	4·65	4·32	4·03	3·78	3·55	3·36					
11 by 10...	—	16·8	13·44	11·2	9·6	8·4	7·54	6·72	6·11	5·6	5·17	4·8	4·48	4·20	3·95	3·73					
12 by 2 ...	—	4·0	3·2	2·66	2·28	2·0	1·77	1·6	1·45	1·33	1·23	1·14	1·06	1·0	·94	·88	·84	·8			
12 by 3 ...	—	6.0	4·8	4·0	3·42	3·0	2·66	2·4	2·18	2·0	1·84	1·71	1·6	1·5	1·41	1·33	1·26	1·2			
12 by 4 ...	—	8·0	6·4	5·33	4·57	4·0	3·55	3·2	2·9	2·66	2·46	2·28	2·13	2·0	1·88	1·77	1·68	1·6			
12 by 5 ...	—	10·0	8·0	6·66	5·71	5·0	4·44	4·0	3·63	3·33	3·07	2·85	2·66	2·5	2·37	2·22	2·10	2·0			
12 by 6 ...	—	12·0	9·6	8·0	6·85	6·0	5·33	4·8	4·37	4·0	3·69	3·42	3·2	3·0	2·82	2·66	2·52	2·4			
12 by 7 ...	—	14·0	11·2	9·33	8·0	7·0	6·22	5·6	5·09	4·66	4·3	4·0	3·73	3·5	3·29	3·11	2·94	2·8			
12 by 8 ...	—	16·0	12·8	10·66	9·14	8·0	7·11	6·4	5·81	5·33	4·92	4·57	4·26	4·0	3·76	3·55	3·36	3·2			
12 by 9 ...	—	18·0	14·4	12·0	10·28	9·0	8·0	7·2	6·54	6·0	5·53	5·14	4·8	4·5	4·23	4·0	3·78	3·6			
12 by 10...	—	20·0	16·0	13·33	11·42	10·0	8·88	8·0	7·27	6·66	6·15	5·71	5·33	5·0	4·7	4·44	4·21	4·0			
12 by 11...	—	22·0	17·6	14·66	12·57	11·0	9·77	8·8	8·0	7·33	6·76	6·28	5·86	5·5	5·17	4·88	4·63	4·4			
13 by 3 ...	—	7·04	5·63	4·69	4·02	3·52	3·12	2·81	2·56	2·34	2·16	2·01	1·87	1·76	1·65	1·56	1.48	1·4	1·34		
13 by 6 ...	—	14·08	11·26	9·38	8·04	7·04	6·33	5·63	5·12	4·69	4·33	4·02	3·75	3·52	3·31	3·12	2·96	2·81	2·68		
13 by 9 ...	—	21·12	16·9	14·08	12·07	10·56	9·38	8·45	7·68	7·04	6·5	6·03	5·63	5·28	4·97	4·69	4·44	4·22	4·02		
14 by 3 ...	—	8·16	6·53	5·44	4·66	4·08	3·62	3·26	2·96	2·72	2·51	2·33	2·17	2·04	1·92	1·81	1·71	1·63	1·55	1·48	1·42
14 by 6 ...	—	16·33	13·06	10·88	9·33	8·16	7·25	6·53	5·93	5·44	5·02	4·66	4·35	4·08	3·84	3·62	3·43	3·26	3·11	2·96	2·84

ENQUIRIES ANSWER

Triptych: Roman Doric Orde

F. P. writes: "Please give an ex tion of the word 'triptych.' Could yo gest books in which I could find exa of (1) an oak altar and reredos wit tych; style, Late Gothic; and (2) ve in a public building; style, Doric?"

—A triptych is a picture enclose folding doors, the inside of which a painted or decorated with diaper. difficult to give an ancient illust owing to the wholesale destruction altars and their fittings underwent Reformation and after. A good n illustration is to be seen in the "Ar tural Review," Vol. XXIII., No. 134,

Roman Doric is not a style but an The vestibule of the Royal Auto Club, London, is a fine example apartment proportioned and detail this order. Illustrations appeared "Architectural Review," Vol. XXIX 174. The vestibule of Somerset Ho also been frequently drawn and illus

Floor Stains.

W. J. D. (London) writes: "Pleas information with regard to the stair a deal floor. The floor in questio up to the present, been subjected following treatment: First, it wa roughly cleaned and scrubbed, an was an old floor all projections, etc., were, as far as possible, remo knocked down. Then without any preparation a very strong coat o oak stain was applied thickly a seemed to sink well into the which are of the wide variety. some weeks a second coat of the sta applied and the room was shut up fortnight to allow it to dry. The rugs about the room, but immedia was subjected to traffic the stain see be kicked right off the boards, them almost white underneath. A coat of the stain was put on shortl this, but with no better result. I know if there is any stain or tre which I can have applied to the floo of burning off all the remaining s ready mixed article) or relaying th with different material."

—It would seem that the prepare used must have contained a propor size, which leaves the stain on the and prevents its entering the wood would account for its chipping o nal coats will effect no improve- A very effective dark oak stain can de by mixing Brunswick black and tine in a dish or saucer to the de- lepth of colour and consistency and g well into the boarding along the on of the grain. This thoroughly ates the wood, leaves no smell or ess, and if polished with Ronuk, a really good and lasting finish. t might try the effect of this mix- n a portion of the floor; it may act artial solvent and combine with the lready applied. If it fails to do so no other course than to burn off nove with a paint remover or er such as oxalic acid, and restain suitable material. G.

.I.B.A. Testimonies of Study.

G. W. (London) writes: "Please our opinion as to the best way to the R.I.B.A. intermediate testimo- nk or pencil. The stipulation is hat the orders are to be done in out- consequently, would it be inadvis- shade them, also freehand draw- By shading orders I refer to mono- in colour."

e outline drawings of the orders for as testimonies of study for the ediate should be inked in with ed ink"—Indian ink and water. ives a less crude line than solid nk and makes a pleasanter drawing. his is completed the orders can be or not as the student desires. The ink combines with the cast s where a black line will not. As ed drawing involves a drawing out- d is simply in excess of the require- there is no reason why the student not make one if he prefers to do so. led drawing is, of course, a much study of the orders than one in pure , as it gives the effect of the model- Nowhere else but in England would haded drawing of the orders be con- as a possible piece of student work. C. H. R.

Building Agreement.

D. (Llanelly) writes: "Please give tions how to draw up a building ent (not a building contract), suit- r the building of houses."

u would do well to have the pro- agreement drawn up by a solicitor itect, in order that all points may be ith. The great thing to take care ch a document is that there should mbiguity; it should clearly state:— parties, the house proposed to be with reference to drawings which be marked and signed), the money aid, and terms of payment, date for tion, how proprietor's objections to rk or materials are to be dealt with, s for failure to carry out the work mplete in time, bankruptcy clauses, ion clause. F. S. I.

nterpretation of Covenants.

. (Brighton) writes: "'Careful's' nd 'F. S. I.'s' reply (see Journal 7, page 16) raise a very important about which there seems to be derable difference of opinion. I the interpretation of the term, ntial Repair.' In 'Macer's Dila- s,' by A. B. Howes (5th Edition, ed by Estates Gazette, Ltd.), the g is definitely stated on page 66:

'*Interpretation of Covenants.*'

ere are numerous legal decisions he extent of the tenant's liability he various repairing covenants. In these the tenant usually undertakes to keep the premises in "good," "habitable," "necessary," "needful," "*substantial*," or "sufficient" repair, *but "none of these expressions has any particular or technical value, and in law they all have much the same meaning*, viz., that some repair is, or will be, necessary," etc., etc.'"

—The law of dilapidations is not a matter upon which a layman—even though he be a dilapidation surveyor—may generalise or lay down very distinct and fixed conclusions; all that one can really say is that it has been held in a certain case that such and such a liability attaches to a lessee or does not attach, as the case may be. To remedy this state of things as far as possible, the R.I.B.A. a few years back suggested a new form of repairs covenant, but I do not think it has been very generally adopted. You will find the little book on dilapidations which is published by the Institute (9, Conduit Street, W.) a very good guide upon this intricate subject; and a paper read before the Surveyors' Institution in March, 1893 (S.I. Trans., Vol. 25, p. 275) contains the best epitome of the subject with which I am acquainted.

There is, I believe, no doubt that any lease which stipulates for "substantial repair" is a dangerous document for a lessee to accept, and I have always advised my clients to refuse to agree to such a clause. "Tenantable" or "habitable" are reasonable words bearing a reasonable interpretation, but "sufficient" and suchlike terms are vague, and, with regard to the word "substantial," it is questionable whether a lessee might not be held liable to well nigh rebuild a house if it fell down! F. S. I.

Direction of Floor Boards.

F. C. G. (Preston) writes: "Please describe the best way to lay the floor boarding to a gymnasium (60 ft. by 35 ft.) to be used mostly for drilling and marching exercises. Should the boards run parallel with the long side or across the short side? I propose to use maple boards on wood joists for elasticity."

—There is little in the customary use of a gymnasium to favour one direction more than another for the run of the floor boards. The ordinary rule of laying them parallel to the long side should therefore be followed. G.

Purchase, Price, and Use of Gravel.

J. J. (Antwerp) sends a sample of English gravel and writes: "I should be obliged if you could give me the following particulars: (1) The name of this gravel. (2) Where procurable. (3) The approximate price per ton. (4) How applied to wall coating. I may add this gravel was used on an English villa built in this country and used as a coating for exterior of walls (rough-cast)."

—(1) The sample sent is shingle from the seashore washed and screened to size. It is common all along the south coast of England, where this size is locally called "pea beach," that of the next larger size being termed "bean beach." (2) I have never seen any in Belgium, but I should think that enquiry in the docks of Antwerp might reveal some such material discharged as ballast. (3) Living in Sussex, I purchased "pea beach" from Messrs. J. and S. Agate, Ltd., builders' merchants, Horsham, they obtaining it in large quantities from the seabeach near Shoreham. No doubt a boat-load could be sent from that port very cheaply. The price at Shoreham (Sussex) is 4s. 6d. per ton (f.o.r.). 4. The gravel may be applied either (1) by mixing it with the rough-cast or (2) by applying it to the surface of the rough-casting when that is in a wet state. The latter process is known as "pebble dashing" and has the merit of showing a bright, clean face to the work. F. S. I.

Tracing Paper for Reproduction Purposes.

W. L. S. writes: "Is there any special tracing or transparent paper from which good prints of pencil drawings can be taken by means of an electric printing machine? I have tried various tracing papers and pencils, but the reproductions are hardly good enough?"

—We know of no tracing paper specially prepared for the purpose mentioned. The excellence of the result depends not so much upon the tracing paper as upon the pencil used, which should be a good black one. Some tracing papers, however, are more suitable than others, namely, those of a fair stiffness and with a dull and somewhat rough surface.

Causes of Water Hammer.

Builder (Leeds) writes: "Can you explain the reason and suggest the remedy for the thumping or hammering noise which frequently occurs, arising evidently in the main water supply inside the house? It is most frequent at nights, but often starts if a tap, after being open, is shut down at all suddenly and continues for some minutes. The water supply here is a constant service at high pressure."

—Concussion in water pipes is caused by the weight of water being shut off and stopped in its flow by turning off a tap suddenly. It usually results from closing the *end* tap of the service, and if the supply rises to the tap from below, may usually be obviated by continuing the pipe for a few inches above the tap to form an air chamber, which then serves as a buffer. Another remedy is to continue each pipe beyond the tap it serves, to join up with some other part of the system and so obtain a circuit. Quick-turn or self-closing valves usually intensify the nuisance unless fitted with a non-concussive chamber. G.

Re-arrangement of Chimney Stack.

P. L. (Gloucester) writes: "A bungalow, built on clay soil, has, in consequence of the drought of last summer, developed some great cracks in the walls and over the doorways in the rooms; the door jambs have gone out of square quite two inches in the doorways by the chimney breasts. The whole of the brickwork above the ceiling stands on the chimney breasts, the four flues running into one central chimney stack. Do you think it would be better to build a separate chimney stack for each pair of rooms? I should think there are quite three tons of brickwork above the ceiling of the rooms."

—If the flues gather over a considerable distance it would undoubtedly be a sounder job to rebuild with a separate stack for each pair of rooms. G.

Mastic Composition for Floor Blocks.

H. H. F. (Northampton) writes: "Please describe a method of making a good mastic composition for laying ordinary wood blocks for a factory floor."

—Trouble so frequently results from the use of imperfect mastic for laying wood blocks that it is better and little more costly to use prepared mastic from a reliable maker such as McNeill's, of Bunhill Row, London. G.

PIRANESI.*

BY J. M. W. HALLEY.

Piranesi stands apart from his time, the middle half of the eighteenth century, by a certain strangeness. Although he could not escape altogether from his age, and doubtless imagined himself to be a great Classic architect, the main interest in his work is the romance with which it is suffused. Winckelmann and the golden age of Classic dilettantism seem very far away when we contemplate the etchings of this great romancer.

That is strange enough, but it is more strange when you consider that he was reared in a Classic tradition, that his masters were Serlio, Alberti, and Palladio, and the great designers of scenery for the stage—the Bibiena. It was while trying to follow in their footsteps that Piranesi stumbled upon romance. He found it among the vast weed-grown quarries that the Colosseum, in its decay, had become.

Piranesi's first published works—namely, his designs for monumental architecture—(1743) have hardly any of the characteristics of his later work: they are touched ever so slightly with romance. The Classic spirit is compact of sweetness and light; there is no mystery connected with it, but, instead, a magnificent reasonableness. But Piranesi, standing as he was, on the threshold of his life when he engraved his designs, and believing himself a Neo-Classic architect, was already half a romantic. The Classic qualities of his mind you may see in conflict with mystery. It may be some startling effect of *chiaroscuro*, the undying vestal flames, the mad tumult of sacrificial smoke and fire, but the romance is there, adding sadness to what should not be sad.

Piranesi developed quickly. By the time he was thirty he had already produced his greatest work—his unique "Carceri d'Invenzione." The plates which make up this series stand apart in art, and it is only in literature that a parallel can be adduced to their sheer terror. De Quincey's "Opium Eater" and the stories of Poe create also an atmosphere of gloom and terror that is almost madness. The horrid cruelty of Piranesi's "Prisons," the iron spikes for the impaling of malefactors, among the other engines of woe, the endless stairs, leading never to freedom, the awful overweening size of the masonry, place these plates among the most imaginative works of man. Technically they have the appearance of spontaneity. But they are in reality carefully considered works, for which preliminary studies were made and from the plates of which an impression was taken—a pale ghost beside the final and better-known prints. The subject of "Prisons" was in Piranesi's mind for many years before it saw its final consummation. And although he never touched it again after 1750, his later work is often fraught with the imagination that gave birth to the "Prisons." Topographical work is not imaginative, as a rule; but with Piranesi, in spite of the limitations imposed on his work by its really topographical aim, it invariably is so. He saw the contrast between the everlasting building of the Romans and the wild growth of centuries that clung to it like a veil, between colossal ruins and the ephemeral dwellings of man, between the petty inches of man and the works of his hand and brain, and drew them for all men to see, as they have never been done before or since. How far they are from the Classical work of Claude you can see by examining the work of the two men. To realise their romantic quality you can compare them with the etchings of Mr. Muirhead Bone or Mr. Frank Brangwyn.

Piranesi may have had an influence on architecture, as Mr. Arthur Samuel and Mr. A. E. Richardson assert, but his contribution to art is an independent one, like that of Méryon, Bone, or Brangwyn, and as such must be judged. It is as a great etcher that he occupies his niche in the temple of fame.

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* Resumé of a lecture on Piranesi, delivered at Toynbee Hall, January 21.

GARDEN CITIES AND TOWN PLANNING ASSOCIATION.

The annual report of this Association states that the directors have decided to recommend a first dividend of 1 per cent. on the share capital. The profit made during the year was over £12,000, but the bulk of this was expended in interest on loans to the amount of £8,868 19s. 10d., leaving £3,158 14s. 2d. as net profit, against £3,086 12s. 2d. in the previous year. The proposed dividend will leave £4,462 0s. 2d. to be carried forward. During the year 1913 some twenty-five new garden suburb schemes have been set on foot, and on nearly twenty of these building has begun. The total area comprised is over 15,000 acres. At an estimate of twelve houses to the acre, accommodation will be provided for about 300,000 people. The same area developed in the ordinary style of urban building would have a population of between $1\frac{1}{2}$ and 3 million people.

Good progress has been made with town planning schemes under the Act of 1909. The Association has contributed materially to the Town Planning Exhibition at Ghent, which was organised by Professor Geddes, besides lending material for a number of small exhibitions during the year. It has also taken part in a number of conferences, including that on the condition of London traffic, presided over by the Right Hon. John Burns, last November, at which nearly every local authority in Greater London was represented. Lecture tours have been undertaken in the United Kingdom and abroad. During the first four months of the year Mr. Culpin, secretary to the Association, visited the United States and Canada, and in the autumn Mr. C. C. Reade toured in Germany and secured a valuable collection of plans and photos, fully illustrating various aspects of town planning and housing conditions. Some progress has been made in connection with the town planning at Rosyth and the Port of London, and the council has been in touch with the landowners and development companies in regard to the area affected by the new Kent coalfield.

Reference is made to the successful opposition to the Northern Junction Railway in the early part of the year, and to the coming re-introduction of that Bill. "The council is of opinion that it is vitally essential to the proper development of Greater London that railway proposals should be considered in conjunction with other traffic facilities and town planning generally. In the present case it seems highly desirable that the conferences of local authorities elsewhere alluded to should have the opportunity of considering the Northern Junction Railway proposals in conjunction with other problems that will come before the districts affected. The council urge that as official conferences have now been set up by a Government Department, liament should decline to sanction Bill authorising such drastic alteratio a railway necessarily must make unti whole of the local authorities conce have had the possibility of the consi tion suggested."

It is proposed to hold cottage exhibi in 1914, and to demonstrate three class cottage property, one, urban housin the lines of the plans recommended b recent circular of the Local Govern Board; the second, the establishment model small holdings colony on the recommended by the Departmental mittee on Buildings for Small Holdi and the third, the erection of labou cottages. Besides this, it has been de to have an exhibition of plans, mo diagrams, etc., at Letchworth, in co tion with the 1914 celebrations.

SOCIETIES AND INSTITUTIO

Lecturing on "Architecture and E ency" at Sheffield University January 24, Mr. W. S. Purchon, the versity lecturer on architecture, p some scathing criticisms on Sheffield b ings, which he compared to their disad tage with the efforts of other to After referring to the mistake made b revivalist architects of the last centu their attempts to copy faithfully famous architectural masterpiece, and neglect of their own problems—he tu to the question of house architect There were still about 16,000 back-to- houses in Sheffield. How did the ac modation in those houses compare that in workhouses and prisons? did it compare with that provided for horses? Back-to-back stables were built. Engineering plant must be effic and when superseded, it must be scrap but we were not ready enough to scrap of-date, inefficient houses, the posses of which was not economy, but a gros travagance, which gave pleasure to no and which no community was wea enough to afford. Yet, he supposed every community there was a stan below which a house must not fall, would be closed as unfit for human ha tion. Evidently it was necessary for standard to be raised, and to be raised siderably.

He wanted to suggest a new stand below which houses should be pulled as unfit to be seen. For there were numbers of houses in the cities of country which did one positive harm e time one saw them—and most of us obliged to see them. Not only did he that such houses served any useful pur but he claimed that they were a pos danger. It might be argued that if houses were necessary they ought, scheme of town planning, to be put w one need not see them: but he claimed while they were allowed to exist ever ought to see them, to realise what meant, and most certainly the nam the owner ought to appear legibly on e

He proceeded to give details of var types of small houses that have erected in several "garden cities." Sp ing of the general appearance of houses said that for a house to be really effic the front must be beautiful and the no less so. It was not necessarily expensive to make a house pleasing in pearance than otherwise. He had many a house which could have been more cheaply and yet made more beaut

To a great extent beauty in architec was a matter of arrangement of fo

›roportion, and good proportion was ecessarily more expensive than bad.

Shop Architecture.

problem of the shop was by no s an easy one. So many of the s of our cities were ruined by the n shop fronts, which consisted of ıg but plate glass. Fortunately eepers were in increasing numbers ing that beautiful goods showed to advantage in a beautiful frame than ugly one. They were, in fact, ly discovering that there was money hitecture! It was not a lofty argu- but it was a sound one.

Purchon went on to speak of the in- e of architecture on the human mind. ecture, he declared, is a matter concerns all of us, here and now. It a matter of going somewhere to see hing. It ought to be all around us, it is not, we ought to want it, and ght to let our wants be known clearly efinitely. We are thorough in some : we want the best in machinery, -cars, and railway engines, but for reason we seem more or less willing up with terribly inefficient buildings ›wns.

The Needs of Sheffield.

his city, little thought seems to have spent in arranging buildings as part omplete scheme. We have no roads g up to our main buildings, the ıs are buried away as if they were we must tolerate but do not like, e have by no means made the best opportunities provided by our beauti- uation.

udging the success of Sheffield it is ough to talk about the development steel industries. Surely prosperity h work should lead to the living of and nobler lives, and should show rdly in the general appearance of y. I understand we are to have ılanning in two suburbs and a new ıere and there, but I firmly believe ttle good doing odd bits in Sheffield. What is needed first is a complete scheme for the ultimate development of the whole city, and our energies ought to be devoted to that, rather than frittered away on oddments. If we do the oddments first—as we probably shall—when the complete scheme is considered, as it ought to be now, but probably will be in ten, twenty, or fifty years, the oddments done in the interval will probably have to be scrapped, and during the next fifty years large portions of the city must be rebuilt. The whole scheme must be dealt with some day, there is no escaping that. Why not now, before more streets are laid out in the wrong places, before more new buildings are erected where streets ought to be cut through or where open spaces ought to be arranged?

BELFAST BUILDERS' ASSOCIATION.

Dinner and Presentation.

The members and friends of the Belfast Builders' Association were entertained to dinner by the president, Mr. R. B. Henry, J.P., in Thompson's Restaurant, last week. The visitors included the Lord Mayor, Sir Robert Anderson, Bart.

The President, in proposing the toast of the "Public Boards," said that the Water Board had spent over two million pounds in connection with their waterworks undertaking in and around the city, and at the present time their engineer was preparing plans to build a very large reservoir in the Silent Valley to hold 3,000,000,000 gallons, and it would be one of the largest reservoirs in the United Kingdom. The cost would probably be from £200,000 to £250,000,

The President (Mr. R. B. Henry, J.P.) was the recipient of handsome gifts as a token of the esteem of the members and in recognition of the valuable services rendered by him to the association. The gifts consisted of a silver five-light candelabra of Queen Anne design, with two silver candelabra of three lights each, forming a set of three candelabra for the table.

Mr. J. O. Campbell, in proposing the "Professional Associations," coupled with the toast the "Architects, Engineers, and Surveyors" of Belfast.

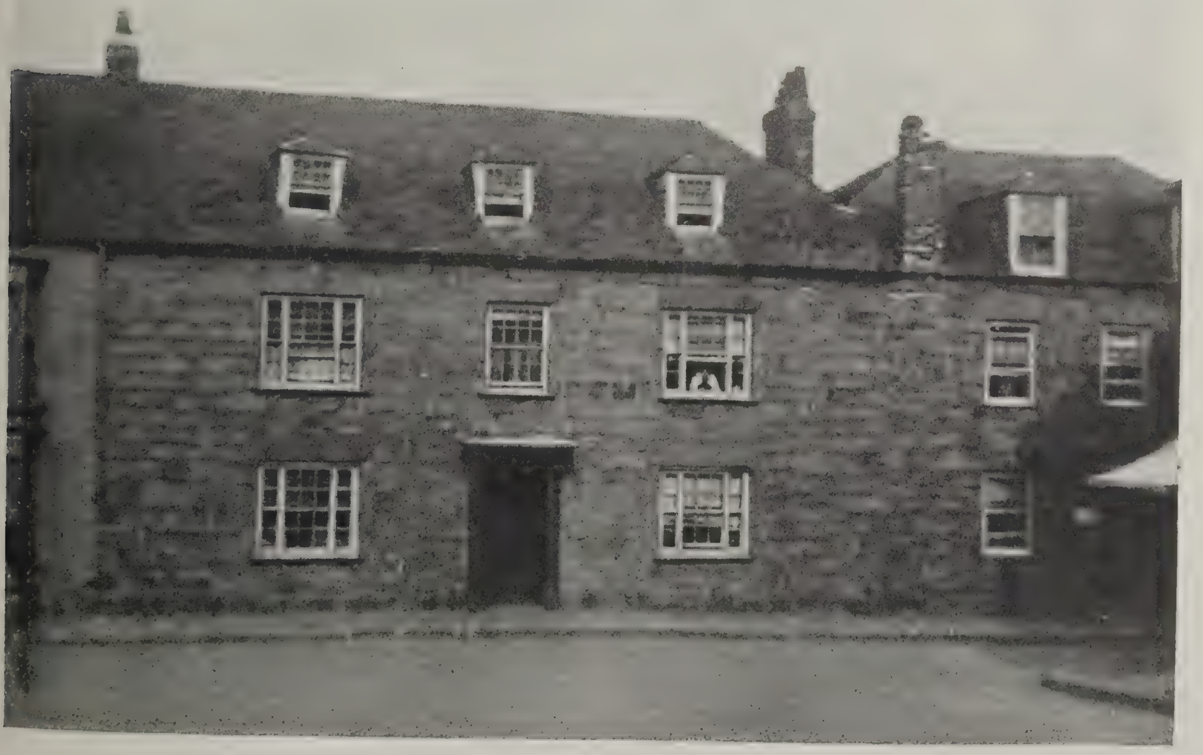
Mr. N. Fitzsimons, president of the Architects' Association, and Mr. R. I. Calwell responded.

PROPOSED WHOLESALE MARKET FOR SOUTH LONDON.

It is proposed to apply to Parliament next Session for power to acquire the necessary land for the construction of a market at Camberwell Green, for produce of all kinds, with extensive cold storage. The market will be entirely roofed over, will consist of two floors, and there will be plenty of room for carts and other vehicles. The scheme includes housing accommodation for about 800 people of the middle class, and it is estimated that the cost will not exceed £250,000. Preliminary plans have been prepared by Mr. John Rawlings.

HOUSE IN THE SCILLY ISLANDS.

The small house shown in the accompanying illustration dates from the early part of the nineteenth century. It is generally representative of the type of domestic work to be found in the West of England, particularly in Cornwall and the Scilly Islands. It is interesting to note how the lighting requirements were met by the introduction of three-light sash windows, which form a distinctive feature of the houses in this part of the country. The walls are faced with granite, and each window has a lintel formed from a single stone. The charm of the front is due in a large measure to the pleasant contrast between window openings and blank wall spaces. In this simple house the fusion of late eighteenth-century with early nineteenth-century work is admirably shown.



HOUSE IN HUGH TOWN, ST. MARY'S, SCILLY.

THE R.I.B.A. EXAMINATIONS.

Preliminary.

The Preliminary Examination, qualifying for registration as Probationer R.I.B.A., was held in London and the undermentioned provincial cities on November 25 and 26. Of the 115 candidates admitted, thirty-three were exempted from sitting, and the remaining eighty-three examined, with the following results:

Centre.	Examined.	Passed.	Relegated.
London	34	22	12
Birmingham	13	11	2
Bristol	9	7	2
Leeds	7	6	1
Liverpool	6	5	1
Manchester	13	7	6
	82	58	24

The ninety-one passed and exempted candidates are as follows:

Baker, M., Sheffield.
Bastable, F. J. N., Golder's Green, N.W.
Bayliss, C. C., Birmingham.
Beard, P. A. E., Hammersmith, W.
Bell, F., Scarborough.
Benge, A. N., Gravesend.
Bowen, W. A. F., Bolton.
Brown, J. McLellan, Stonehouse, Scotland.
Burnet, E. M. W., Aberdeen.
Butlin, F. G. M., Harpenden, Herts.
Carruthers, R. B., Regent's Park, N.W.
Chase, A. G., Bromley.
Cholmeley, G. H., London, N.W.
Claydon, L., Tunbridge Wells.
Clouston, J. G., Stratford.
Cock, G. H., Shrewsbury.
Cock, J. C. P., Keyham, Devonport.
Connabeer, C. R., Southend-on-Sea.
Cordingley, R. A., Sale, Manchester.
Couchman, H. W., Tottenham.
Cregeen, C. A., Isle of Man.
Crick, W. E., Cliftonville, Northampton.
Crosthwaite, W. J., Windermere.
Cundall, P., Sale, Manchester.
Davidge, H. E. J., Streatham, S.W.
Dey, B. N., Glasgow.
Dhama, B. L., India.
Eprile, C. J., London, W.
Finch, W. B., Sydney, N.S.W.
Fitch, C. H., East Dulwich, S.E.
Frith, H. G., Cardiff.
Galsworthy, G. R., Hyde Park, W.
Gardner, E. K., Leamington.
Garlick, A. J., Coventry.
Godfrey, F. W., Fulham, S.W.
Gourlay, W., Glasgow.
Guest, J. E. C., Finchley, N.
Gunston, E. L., Kidmore, near Reading.
Halfhide, F. W., Streatham, S.W.
Hamilton, I. B. M., Kensington, W.
Hardy, T. C., Langside, Glasgow.
Harrison, A. St. B., Beckenham, Kent.
Hatton, J., Sutton Coldfield.
Hemmings, W., Newcastle, Staffs.
Holyoak, F., Winchester.
Hopkins, W. W., South Bromley, E.
Howell, R. B., Reading.
Hutcheson, T. F. T., Saffron Walden, Essex.
Irwin, S. F., Kingston-on-Thames.
Jones, G. F., Aberdare, S. Wales.
Kellock, A. D., Portobello.
Langham, G. D., Leicester.
Lawrence, H. G., Peckham, S.W.
Lloyd, W. H., Chelsea, S.W.
Lomax, A., Radcliffe, Manchester.
London, D. N., Wotton Without, Gloucester.
Long, W. D., Sunderland.
Love, C. J., Downpatrick, Co. Down.
Lowther, C. G. A. B., Bridlington.
Lowy, E. L., Holland Park, W.
Macpherson, A. A., Edinburgh.
Mason, B., Leeds.
Mayman, E. J., Birmingham.
Mitchell, D. S., Hastings.
Moesch, C. E. W., Douglas, Isle of Man.
Napier, D. C., Taunton.
Oswell, H. L., Shrewsbury.
Palmer, K., Sheringham, Norfolk.
Pearce, J. M., Bristol.
Philp, A. T., London, S.W.
Philp, R. M. H., London, E.C.
Porter, D. G., London, W.
Prosser, D. S., Penarth, Cardiff.
Reckless, F. H., jun., Sheffield.
Reynolds, E. L., Aberdare.
Roberts, D. H., Wombwell, Barnsley.
Sanders, J. E., Liverpool.
Sharp, F. G., Winchester.
Shearer, T. S., Chelsea, S.W.
Singh, K., London, E.C.
Smith, R. J. B., Kenilworth, Warwick.
Smith, W. R. L., Northampton.
Stewart, C. B., Darlington.
Sykes, J. N., Stainland, Halifax, Yorks.
Walker, A. L., Solihull, Birmingham.
Watt, W. J., Aberdeen.
Westwood, W. R., Edgbaston, Birmingham.
Willett, S., Old Trafford, Manchester.
Wiseman, A. E., Chelmsford.
Wood, L., Hipperholme, Halifax.
Wood, T. S., Handsworth Wood, Birmingham.

Intermediate.

The Intermediate Examination, qualifying for registration as Student R.I.B.A., was held in London and the undermentioned provincial cities from November 21 to 28. Sixty-nine candidates were examined, with the following results:

Centre.	Examined.	Passed.	Relegated.
London	43	26	17
Bristol	2	1	2
Glasgow	3	3	—
Leeds	1	1	—
Liverpool	4	2	2
Manchester	12	7	5
Newcastle	3	2	1
	69	42	27

The passed candidates are as follows, the names being given in order of merit:

(P. = Probationer.)

Bone, J. C. (P. 1910), Edinburgh.
Hull, J. V. (P. 1908), Lofthouse, Garstang, Lancs.
Foster, F. G. (P. 1910), Selby.
Bestow, S. F. (P. 1906), London, N.E.
Saxon, F. C. (P. 1908), Rochdale.
Hendry, M. (P. 1912), Aberdeen.
Mackay, H. (P. 1910), Fulham, S.W.
Hossack, J. D. (P. 1912), London, W.C.
Hanbury, P. H. (P. 1908), Bath.
Boniface, C. F. (P. 1906), Petersfield.
Lyne, D. R. (P. 1905), London, S.W.
Doyle, E. L. (P. 1912), Manchester.
Picton, C. S. (P. 1912), London, S.E.
Wardill, R. W. (P. 1909), Chelmsford.
Garrard, C. P. (P. 1908), Westerfield, Ipswich.
Ashman, H. W. (P. 1907), East Molesey.
Church, L. D. A. (P. 1910), Epping.
Davies, J. P. W. (P. 1907), Newport, Mon.
Paice, C. L. (P. 1912), Cromer.
Graham, R. D. (P. 1910), Carrickfergus, Co. Antrim.
Duckworth, A. P. 1910), Accrington.
Loweth, S. H. (P. 1911), London, N.E.
Knight, S. (P. 1907), Phippsville, Northampton.
Bisiker, A. M. (P. 1911), London, N.
Shenstone, G. (P. 1910), Leytonstone, N.E.
Ashby, L. J. (P. 1912), Nottingham.
Routley, L. J. (P. 1911), Taunton.
Allcorn, W. J. (P. 1912), Shipbourne, Tonbridge, Kent.
Appleby, S. D. (P. 1910), Bolton.
Armstrong, J. R. (P. 1912), Hawick, N.B.
Bonsor, K. J. (P. 1911), London, S.E.
Bruce, J. C. C. (P. 1909), Newcastle-upon-Tyne.
Cheriton, W. G. L. (P. 1906), London, S.W.
Gill, M. B. (P. 1910), London, N.
Johnson, A. G. (P. 1909), Leytonstone, N.E.
Kassem, H. Z. (P. 1912), Fallowfield, Manchester.
Leadam, E. G. S. (P. 1912), London, S.W.
Martin, J. P. (P. 1912), London, W.
Radcliffe, J. (P. 1911), Greenfield, via Oldham.
Stobbart, F. R. (P. 1911), Newcastle-on-Tyne.
Turner, T. E. (P. 1906), Surbiton, Surrey.
Wood, A. J. (P. 1908), Leicester.

Exemptions from the Intermediate.

The following Probationers possessing the certificates required under the regulations were exempted from the Intermediate Examination, and have been registered as Students, viz.:

Addey, F. A. (P. 1910), London, S.W. [Architectural Association, Third Year Course.]
Binnie, W. B. (P. 1905), London, S.W. [Senior Certificate, Glasgow School of Architecture.]
Bradshaw, H. C. (P. 1911), Wavertree, Liverpool. [1st Class Certificate, Liverpool School of Architecture.]
Davies, E. C. (P. 1909), Bedford. [Architectural Association, Third Year Day School Certificate.]
Gee, E. (P. 1910), Chester. [1st Class Certificate, Liverpool School of Architecture.]
Hamilton, I. B. M. (P. 1913), London, W. [1st Class Certificate, University College, London University.]
Hooper, A. F. (P. (1912), Beckenham. [Architectural Association, Third Year Day School Certificate.]
Howcroft, G. B., B.A. (P. 1912), Uppermill, near Oldham. [Victoria University of Manchester.]
Kellock, A. D. (P. 1913). Portobello, Edinburgh. [Diploma in Architecture, Edinburgh College of Art.]
Macpherson, A. A. (P. 1913), Edinburgh. [Diploma in Architecture, Edinburgh College of Art.]
Newboult, B. (P. 1911), Shipley, Yorks. [1st Class Certificate, Liverpool University.]
Philp, R. M. H. (P. 1913), London E.C. [Architectural Association, Third Year Day School Certificate.]
Shibley, A. R. S. (P. 1911), Sheringham, Norfolk. [1st Class Certificate, Liverpool University.]
Tebbutt, H. J. (P. 1910), Westminster. [Architectural Association, Third Year Day School Certificate.]
Vincent, S. A. (P. 191[illegible] Hampstead, N.W. [1st Class Certificate, University College, London.]
Wallace, R. S. (P. 1910), London N.W. [Architectural Association, Third Year Day School Certificate.]
Whitehead, H. M. (P. 1910), Brentford. [Architectural Association Four Years' Course.]
Wilson, J. (P. 1913), Glasgow. [Diploma, Glasgow School of Architecture.]

Final and Special.

The Final and Special Examinat qualifying for candidature as Ass R.I.B.A., were held in London from cember 4 to 12. One hundred seventeen candidates were exam sixty-three passed, and the remaining four were relegated. The passed c dates are as follows:

Adams, L. K., M.A. (S. 1906), Birkdale, Lancs.
Aylwyn, G. M. (S. 1911), West Hampstead, N.W.
Baskerville, J. A. (S. 1908), Crumpsall, Manchester.
Bennett, P. D. (S. 1911), Edgbaston, Birmingham.
Birnstingl, H. J. (S. 1912), London, W.
Box, C. W. (S. 1909), South Benfleet, Essex.
Bull, J. W. (S. 1912), London, E.C.
Calvert, C. H. (S. 1908), Nottingham.
Cook, J. O., jun. (S. 1904), London, S.W.
Cooper, J. G. (S. 1912), Bolton.
Cromie, R. (S. 1909), Great Malvern, Worcestershire.
Crone, H. (S. 1911), London, W.C.
Culliford, L. A. (S. 1909), Coventry.
Davidson, O. F. (S. 1908), Gosforth, Newcastle-on-Tyne.
Dawson, W. F. (S. 1907), Gledhow, Leeds.
Dod, H. A. (S. 1909), Birkdale, Lancashire.
England, E. S. (Special), Oldham.
Fisher, S. H. (S. 1911), London, S.W.
Foggitt, G. H., A.R.C.A. (S. 1907), Tite Prizeman 1911, Yeadon, near Leeds.
Friskin, W. W. (S. 1913), London, W.
Gaymer, B. P. (S. 1912), North Walsham, Norfolk.
Gibbs, H. B. S. (S. 1911), Sheffield.
Grice, W. S. (S. 1911), Ealing, W.
Gutteridge, R. H. (S. 1912), London, E.C.
Harris, P. C. (S. 1910), Hampstead.
Hartmann, C. H. (S. 1908), London, W.C.
Hatchard-Smith, W. H. (Special), London, E.C.
Hawley, C. D. (S. 1908), London, N.W.
Heal, A. V. (S. 1910), E. Twickenham.
Hitch, J. O. B. (S. 1913), London, S.W.
Holland, H. D 1909), Wigan.
Hughes, V. H. 1911), San Kent.
Jelly, F. R. (S. London, W
Jones, G. H. (S. London, S.E.
Jones, H. (S. Manchester.
Jones, W. S. (S. Sutton, Surrey
Kimpton, C. S. cial), Ascot.
Knapp-Fisher, (S. 1909), Londo
Leighton, H. 1912), Meersb Sheffield.
Lowcock, A. (S. Dronfield, Sheffi
Lowes, A. E. (S. Newcastle-on-Ty
MacKellar, R. (S. 1912), Glasg
Mann, H. W. (Sp Witham, Essex.
Matthews, H. 1906), Derby.
Moerdijk, G. (S. London, N.W.
Newham, T. 1909), West stead.
Paterson, W. (S. Edinburgh.
Pocock, P. W., (S. 1909), Eghar
Powell, H. C. (S. Stockport.
Pritchard, W., P (S. 1905), Rock Cheshire.
Rogers, C. W 1912), London,
Russell, R. T. 1909), London,
Rutter, W. Westmin
Salisbury, S. (S. Harpenden, He
Scott, T. C. (S. Norwich.
Smith, E. (S. Neath, S. Wale
Stanton, S. J. B. cial), London,
Tebbs, C. E. (S. Newport, Mon.
Thompson, W. 1909). London,
Walter, R. A. (S. London, N.
Warnes, C. C. T. cial), Edinburg
Woodward, F. cial), London,
Yetts, L. M. (S. London, E.C.

Licentiates and the Fellowshi

The following Licentiates have the Examination qualifying for candid as Fellows:

Buckland, H. T., Birmingham.
Clay, G. F. N., London, S.W.
Deacon, B. C., Luton, Bedfordshire.
Haywood-Farmer, E., Birmingham.
Foss, J. H. B., don, W.
Halley, J. M. W. don, W.C.
Lines, R. W., ton, Albe Canada.

Big Shop-fitting Contract.

Messrs. Horne Brothers, hosiers, entrusted with Messrs. Stanley Jone Co., Ltd., the contract for the entire lation of fronts and interior fittings a new branch in Oxford Street. The tract is to the value of many thousa pounds, and the work entailed will many hundreds of men in employme several months. The designs, whic of a most elaborate nature, have bee pared by Mr. Victor Page, architect, whose supervision the work will be c out.

ECIAL LEGAL REPORTS.

Architect's Suit for Fees.

Couchman v. Biezyuska.

y 30. King's Bench Division. Before Mr. ce Rowlett and a Common Jury.

s was an action by Mr. Harold S. man, an architect, of High Road, nham, against M. Biezyuski, the f a Russian gentleman, to recover the f £45 in respect of fees for services ed in connection with the erection of use at Hothford Road, Golder's

defence was that the services were on the instructions of the husband ot those of the defendant.

A. H. Richardson appeared for the ff, and Mr. Farleigh for the defend-

ntiff's case was that in February last he erviewed by the defendant's brother behalf, and the result was that he gaged on behalf of the defendant to tend the completion of the house was being erected at Golder's Green. alings were on the assumption that endant was employing him, and he t any time looked to the defendant's d for his remuneration. He t that the house was the defendant's.

r evidence having been given for the f, the defendant stated that after her ge it was agreed that the house in n should be assigned to her. She ever having authorised her brother licitor to act on her behalf and in-he plaintiff: She was always under ression that her husband was liable expenses connected with the build-he house, as it was he who gave in-ns with reference to it.

jury found for the plaintiff, and nt was entered accordingly with

rror in a Contract: Rectification.

ommissioners of Works v. King.

o. Chancery Division. Before Mr. Justice

was an action by the plaintiffs for ification of a contract, the defend-ng Mr. William F. King, trading yle of William King and Sons, and contractors.

Solicitor-General, Sir S. Buck-K.C., said the action arose out of hose extraordinary accidents that to haunt business affairs. The nt was given a contract for the of the Western District Post Office pole Street. With the contract hedule fixing the prices for certain work, and by a mistake of a typist eet" was used instead of "cubic which if given effect to would have l the sum of £20,352 to £133,405. as some dispute as to the amount ndant should be paid for certain s, and defendant then pointed out or as a ground for allowing his s, if he had asked for payment on s of cubic feet instead of cubic e claim would have been increased oo to £21,852, an amount larger amount of the original specifica-Plaintiffs thereupon brought this r rectification of the contract.

half of the defendant it was con-hat, having regard to the serious the plaintiffs had made, they had to rectification. Defendant, how-not wish to act unfairly, and the claim would not have been made if he had been properly dealt with.

His Lordship decided that the contract must be rectified as asked.

Judgment was accordingly given for rectification of the contract.

QUANTITY SURVEYORS' ASSOCIATION DINNER.

The annual dinner of the Quantity Surveyors' Association was held in the Connaught Rooms on Tuesday, February 3, when the chair was occupied by the President, Mr. T. J. Carless, A.K.C. The attendance, which numbered over 100, included Sir H. H. Bartlett, Messrs. H. Percy Boulnois, J. Dixon Butler, H. T. A. Chidgey, Percy B. Tubbs, Walter Lawrence, jun. E. J. Brown, George Hubbard, A. A. Hudson, K.C., C. Fitzroy Doll, Alderman William Thompson, E. P. Wells, W. Thomas, F. Higgs, Ralph Knott, T. E. Bare, Walter Lawrance, and S. Chatfeild Clarke.

Mr. H. Percy Boulnois, proposing the toast of "The Quantity Surveyors' Association," described some of the many problems with which they had to deal. They were endeavouring to establish standardisation of measurement, but they found considerable difficulty with the nomenclature. For instance, they could not define "pitch." They were trying to secure registration of title, and he hoped they would succeed. But what was a quantity surveyor? They would be indebted to anyone who could give a definition which would satisfy the Board of Trade. Continuing, Mr. Boulnois said he had made some research into the question of the age of the quantity surveyor, and the only thing which seemed roughly to mention the profession was Butler's "Hudibras," a poem of about 1630, in which the following lines occurred:

> "In mathematics he was greater
> Than Tycho Brahe or Erra Pater;
> For he, by geometric scale,
> Could take the size of pots of ale."

He believed, however, that the reference was to a bibulous monk rather than to a quantity surveyor.

The President, in reply, first expressed the Association's sympathy with Mr. A. G. Cross (their hon. secretary), and with Mr. A. W. S. Cross, who were both prevented from being present owing to the death of their mother. Quantity surveyors, he continued, were little known, little understood, and little appreciated. Their names were never to be seen on foundation stones nor in the lists of New Year and Birthday Honours. They were quiet and unobtrusive. They had not the joy of creation which was the architect's, nor the interest of execution which was the builder's. Theirs was the work of contemplation and appreciation of the executive ability of others. Standardisation, he continued, or, as better termed, uniformity of custom, had been dealt with by their Council, joint committees having been established with other bodies concerned. There was a good deal of difference of opinion with regard to standardisation. Mr. George Corderoy, indeed, called it a vain quest. The foot cube had been suggested as the unit of measurement, but the same unit was not suitable to all classes of work. Too rigid a standardisation must be a bar to progress. It was interesting to note that the South African Quantity Surveyors' Association had compiled and issued a standard system of measuring builders' work which had been accepted by the South African Federation of Builders, who had promised to endeavour to bring it into effect. With regard to registration, the President drew attention to the fiduciary character of their work, and said public interest demanded that only qualified men should call themselves quantity surveyors. His Council, he continued, were strongly opposed to the practice adopted by some local authorities of advertising for quantities, and they communicated with all offenders, protesting strongly against it.

Mr. T. E. Bare proposed the toast of "The Architects," to which

Mr. George Hubbard, F.R.I.B.A., replied in the unavoidable absence of Mr. Blomfield. Referring to registration, he advised them not to shackle themselves with a Registration Bill, but to follow the example of the R.I.B.A. and apply to the King, through the Privy Council, for a Charter.

Mr. Stanley Chatfeild Clarke proposed the toast of "The Contractors," expressing sympathy with the London Master Builders' Association in their present trouble.

Mr. Walter Lawrence, jun., in reply, having recapitulated the circumstances of the lock-out, explained why the L.M.B.A. refused to treat with the London Building Trades Federation. That body comprised nineteen unions, of which the builders were only concerned with nine. If they entered into a bargain, in the event of the gas-workers having a disagreement, it followed that their own men, not concerned with it, would be brought out. They were not prepared, therefore, to enter into an agreement with men who had no concern whatsoever with the building trade.

Mr. H. T. A. Chidgey proposed the final toast, "The Visitors," to which Sir Herbert Bartlett replied.

BRITISH SCHOOL AT ROME.

The Faculties of Architecture, Sculpture, and Painting of the British School at Rome have held their respective meetings to judge the works submitted in the Open Examinations for the Rome Scholarships in Architecture, Sculpture, and Decorative Painting which are offered annually by the Commissioners for the Exhibition of 1851. The following candidates have been selected to compete in the Final Competitions:

ARCHITECTURE.

Thomas Braddock [London].
Walter de Keesey [London].
P. D. Hepworth [late of the A.A. and the Ecole des Beaux-Arts, Paris].
B. A. Miller [present member of Liverpool School of Architecture].
Ernest Cornill [of the Ecole des Beaux-Arts, Paris].
F. Jenkins [present member of the Liverpool School].
G. R. F. Cole [present member of the Liverpool School.]
D. St. Clair MacPhail [Edinburgh].

SCULPTURE.

Benjamin Hancocks.
Charles Sergeant Jagger.
Frederick John Wilcoxson.
William Henry Wright.

DECORATIVE PAINTING.

John Miles Bourne Benson.
Gladys Dorothy Davison.
Thomas Corrie Derrick.
Samuel Woods Hill.

The works of the competitors will be on view at the Imperial Institute, Upper Central Gallery, west entrance, during this week from ten o'clock till four; Saturday from ten to one.

PROJECTED NEW WORKS.

Church, Scarborough.

Plans of the new church of St. Columba, Scarborough, have been approved. The cost will be £7,000.

Children's Homes, Basford.

The Local Government Board have sanctioned the erection at Basford of children's homes at a cost of £6,500.

Concert Hall, Ramsgate.

Ramsgate Corporation have decided to erect a concert hall and shelter on West Cliff at a cost of £5,000.

Municipal Buildings, Dudley.

Dudley T.C. propose to erect new municipal buildings at an estimated cost of £40,000.

Institute, Lewisham.

Canon Hough, Vicar of Lewisham, has arranged to build, at his own expense, a men's institute for the parish, as a memorial of his only son, who died last year.

Training Centre, Aberdeen.

Plans are being prepared by Mr. J. A. O. Allan, of Aberdeen, for a new teachers' training centre in Aberdeen, to cost about £50,000.

Arcade, Birmingham.

A large new arcade, to link up Bull Street and the North-Western Arcade, Birmingham, is to be begun in September.

Building Scheme, Dewsbury.

Dewsbury Corporation have approved amended plans for laying out the Northgate estate.

Police-Court, West London.

Built sixty years ago, the West London Police-court is now in the hands of the housebreakers, and a new building is to be erected on its site.

Tenements, Swansea.

Eighty tenements are to be erected in the Strand, Swansea, by Mr. David Vaughan. The cost is estimated at £10,000.

Schools, Carlisle.

Carlisle Education Committee have recommended the Town Council to apply to the L.G.B. for sanction to borrow £6,300 for expenditure on proposed new school buildings.

County Asylum, Trowbridge.

A Local Government Board enquiry has been held at Trowbridge into the application of Wilts C.C. for sanction to a loan of £50,000, to be devoted to the extension of the County Asylum.

Buildings, Glasgow.

Glasgow Dean of Guild Court have granted the following linings: Joiners' shop, Merrylee, Cathcart (Archibald Davie, Newlands); new buildings, Clyde Galvanising Works, Mavisbank (Smith and M'Lean, Ltd.); tenements, Trefoil Avenue (James Wright, Newlands); offices, Dawson Street, and new street, Parkhead (William Beardmore and Co., Ltd.); cinematograph theatre, Wellshot Road, Tollcross (George Green, 843, Gallowgate); alterations and additions to 42 to 46, Bath Street (Tramways Department of the Corporation).

London.

The L.C.C. have consented to the erection of the following works:

Brixton.—Addition at the rear of No. 168, Coldharbour Lane, Brixton, on the application of Messrs. Rodwell, Son, and Scenling, on behalf of Dr. Durno.

Brixton.—Buildings on the northern side of Baytree Road, Acre Lane, Brixton, on the application of Messrs. E. Evans and Sons.

City of London.—Uniting of Nos. 298-300 with Nos. 302-304, Bishopsgate, at the basement, first and second floor levels, on the application of Messrs. Lovegrove and Papworth, on behalf of Wilkins and Denton, Ltd.

City of London.—Additional cubical extent in connection with the erection of a printing office and factory building abutting upon Shoe Lane and Plumtree Court, City, on the application of R. Waygood and Co., Ltd.

Chelsea.—Addition at the rear of No. 13, Cheyne Gardens, Chelsea, on the application of Messrs. Lander, Bedells, and Crompton.

Clapham.—Nos. 44, 46, and 48, Roseneath Road, Clapham, with stable buildings at the rear, on the application of Mr. W. G. Ingram, on behalf of Mr. T. D. Ingram.

Deptford.—Alteration to shop front, No. 225, Lewisham High Road, Deptford, on the application of Messrs. D. J. Conner and Sons.

Fulham.—Building on the northern side of Broughton Road, Fulham, on the application of Mr. W. Jopling, on behalf of Loud and Western, Ltd.

Fulham.—Additional cubical extent at Drayton Paper Works, Peterborough Road, Fulham, on the application of Mr. H. Harrington, on behalf of the Drayton Paper Works, Ltd.

Hackney, Central.—One-storey addition at the rear of No. 93, Richmond Road, Dalston, next to Lansdowne Road, on the application of Mr. D. P. Hayworth.

Hackney, South.—Building, Sidney Road, Homerton, on the application of Mr. C. G. Stanham, on behalf of Mr. J. Isaacs.

Hoxton.—Additional storey at Nos. 11-21, Paul Street, Finsbury, on the application of Mr. A. R. Henderson, on behalf of W. Macqueen and Co., Ltd.

Kensington, South.—External iron gangways and staircases at the rear of Warwick Mansions, Cromwell Crescent, Kensington, on the application of J. Barker and Co., Ltd.

Lewisham.—Building on the eastern side of Kirkdale, Lewisham, to abut also upon the northern side of Collingtree Road, on the application of Mr. R. G. Bare.

Marylebone, East.—Addition to the Radium Institute, Ridinghouse Street, St. Marylebone, on the application of Mr. T. P. Figgis.

Marylebone, East.—Shop front at No. 52, New Cavendish Street, St. Marylebone, on the application of Mr. S. E. V. Tattersall, on behalf of Mr. T. Foakes.

Marylebone, East.—Building upon the site of Nos. 81, 82 and 83, Margaret Street, St. Marylebone, on the application of Mr. E. Willmott, on behalf of the All Saints' Sisterhood and Religious and Charitable Community.

Marylebone, West.—Alterations at No. 356, Oxford Street, and No. 21, Stratford Place, St. Marylebone, on the application of Mr. F. W. Hunt.

Newington, West.—Oriel windows and projecting porches to thirty-two houses on the north-western side and thirty-five houses on the south-eastern side of Doddington Grove, Kennington, on the application of Messrs. Briant and Son on behalf of Messrs. D. H. Whitcher and Co.

Paddington, North.—Alterations and additions at No. 10, South Wharf, Paddington, on the application of Mr. W. W. Gibbings.

St. George, Hanover Square.—U
of Nos. 28 and 29, Conduit Street,
over Square, on the application of M
K. Purchase.

St. Pancras, South.—Two proj
cranes at the premises of the Wel
Light Company, Ltd., Wicklow S
St. Pancras, on the application of M
M. W. King and Sons.

Southwark, West.—Stable buildin
the western side of Barron's Place, B
friars, on the application of Mr. W.
ton, on behalf of the Maltina Bak
Ltd.

Strand.—Iron and glass shelter ov
entrance to the Charing Cross D
Railway Station, Villiers Street, St
on the application of Mr. W. E. M
lick, on behalf of the Metropolitan
trict Railway Company.

Woolwich.—Addition to an ex
chimney shaft at the premises of Si
Brothers and Co., Ltd., Ha
Manorway, Woolwich, on the appli
of Siemens Brothers and Co., Ltd.

COMPETITIONS.

Cottages, Manchester.

Blackley Estate Sub-Committee
decided to invite competitive desig
fifty semi-detached cottages to be e
on a portion of their estate. It is pro
to offer premiums of £50 and £25.

Wesleyan Methodist Church, Car Yorks.

The trustees of the proposed new
leyan Methodist Church at Carcroft
architects to submit competitive d
for the building. Applications m
made by Saturday, February 21,
J. C. Starkie, solicitor, 52, Hallgate
caster.

Town Hall, Barnsley.

Members of the Society of Arc
are notified that some of the condit
the above competition are not in a
ance with the regulations adopted
society. They are requested to
from competing until the condition
been amended.

L.C.C. Elementary Schools.

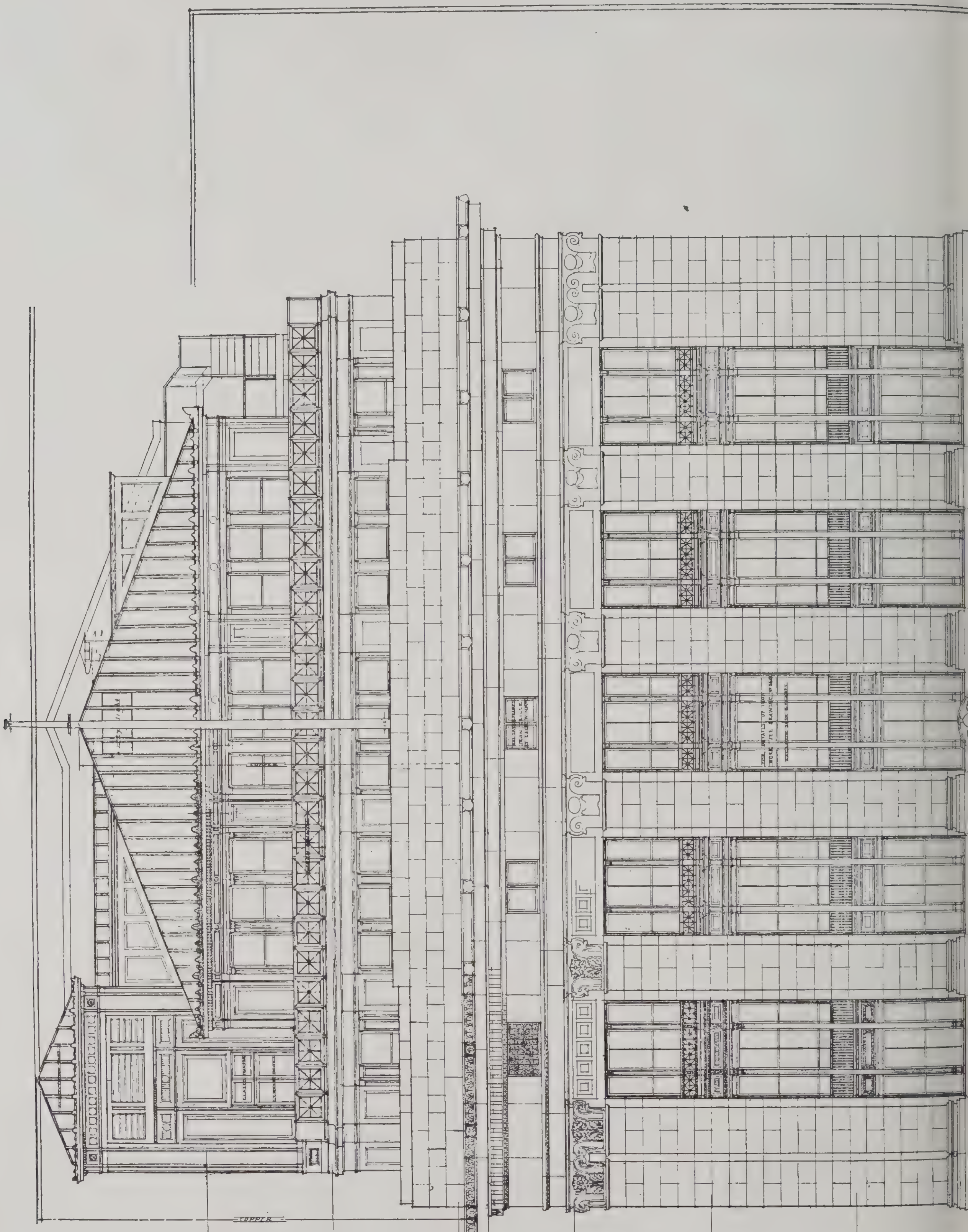
The London County Council invit
petitive designs for two new pub
mentary schools to be erected at
wich and Battersea respectively
John W. Simpson, F.R.I.B.A., ha
appointed assessor. The conditi
competition are printed in the stat
accompanying reports of committ
February 10.

Villa-Flats, Lido, Venice.

An Italian company has arrange
ternational competition in plans
construction of villa-flats at Lido,
The total cost is not to exceed £
Prizes of lire 12,000 (£480), lir
(£320), and lire 5,000 (£200)
awarded. Plans must be sent, n
than noon on June 30, to the D
della Compagnia Italiana dei
Alberghi, S. M. del Giglio 2,467,
where further particulars m
obtained.

THE ROYAL GOLD MEDALLIS

At the meeting of the R.I.B.A.,
Monday evening last, it was an
that M. J. L. Pascal had been no
to receive the Royal Gold Meda
presentation will be made in March


COPPER
COPPER
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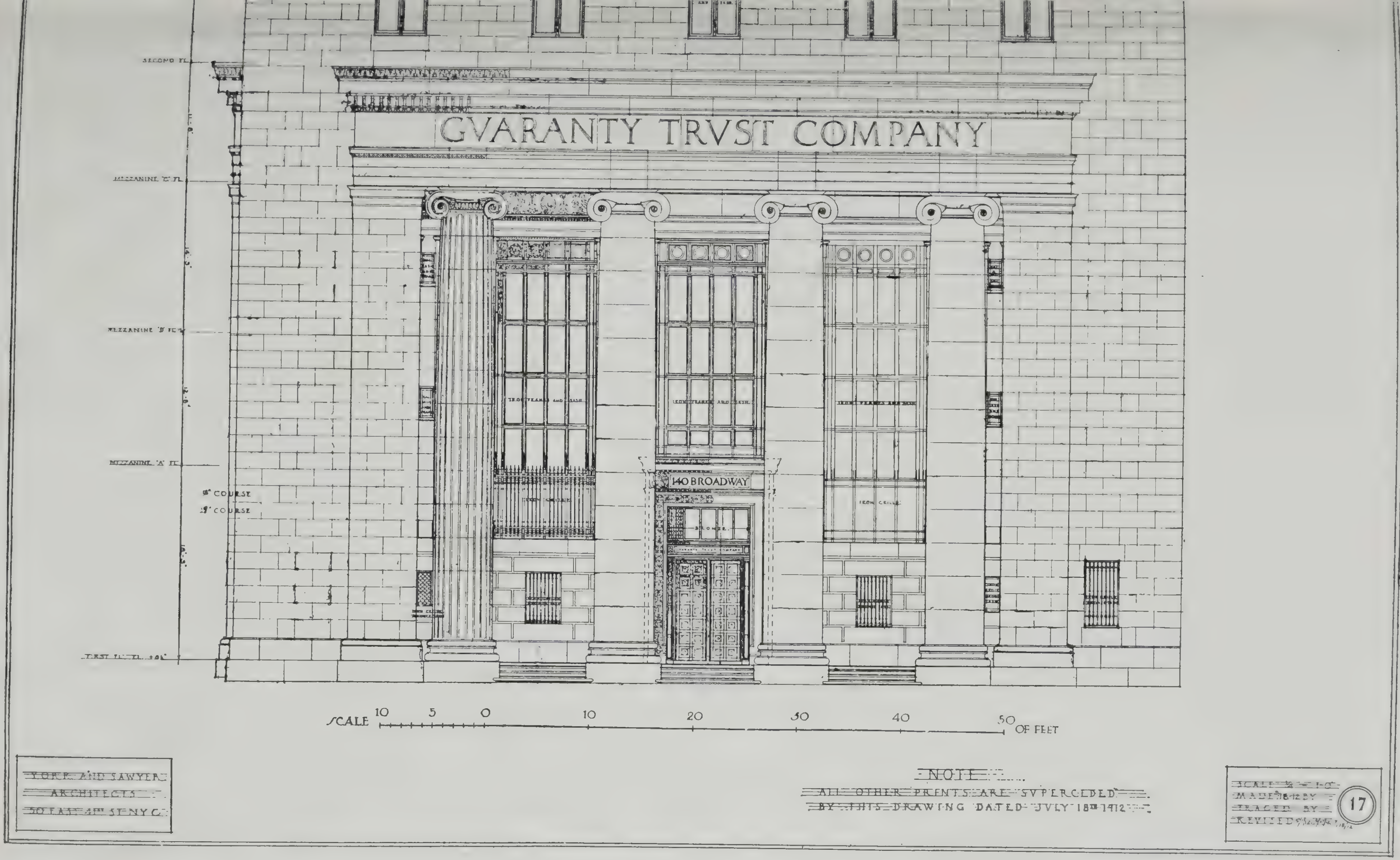
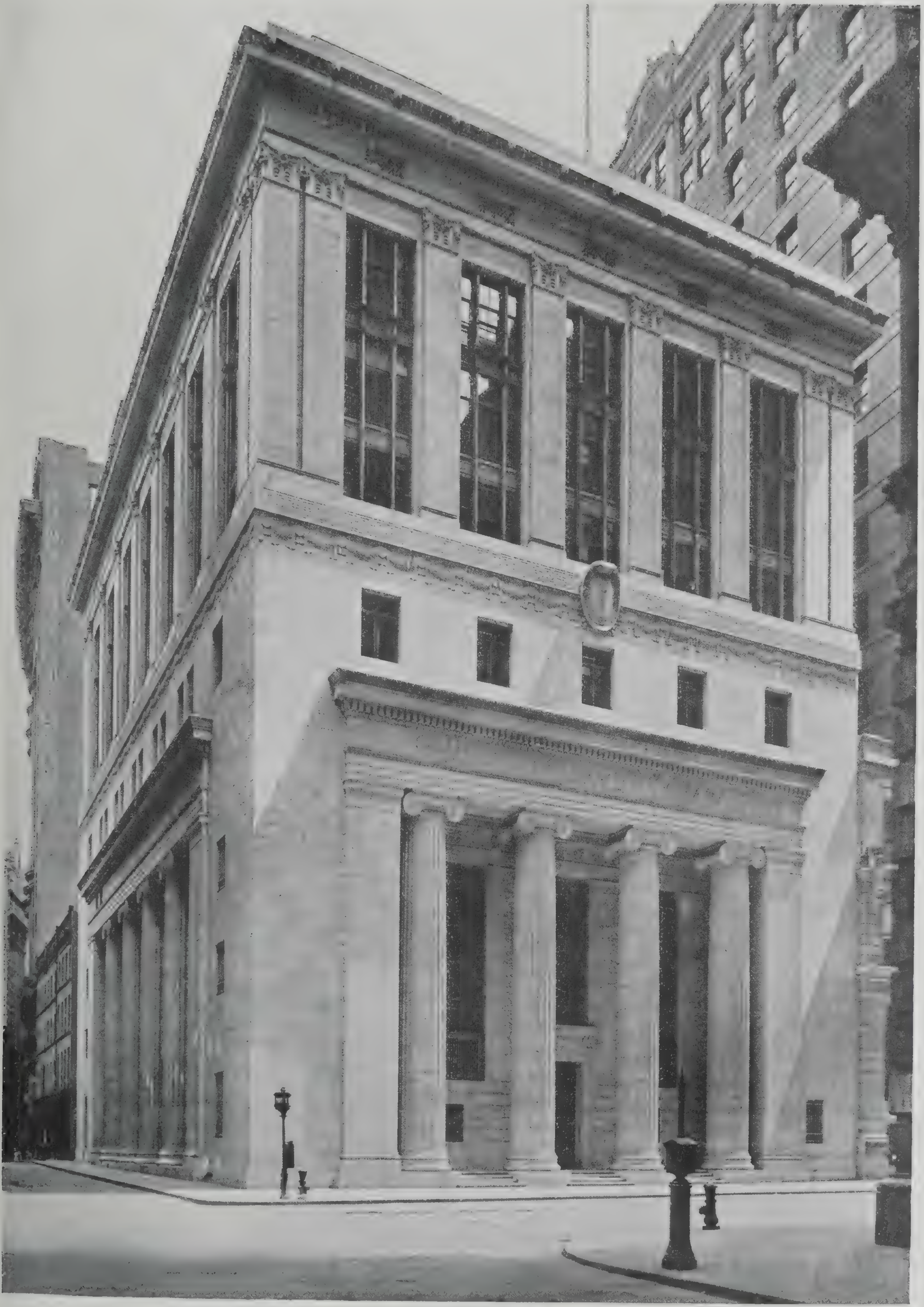
EIGHTH FL
SEVENTH FL
SIXTH FL
FIFTH FL
FOURTH FL



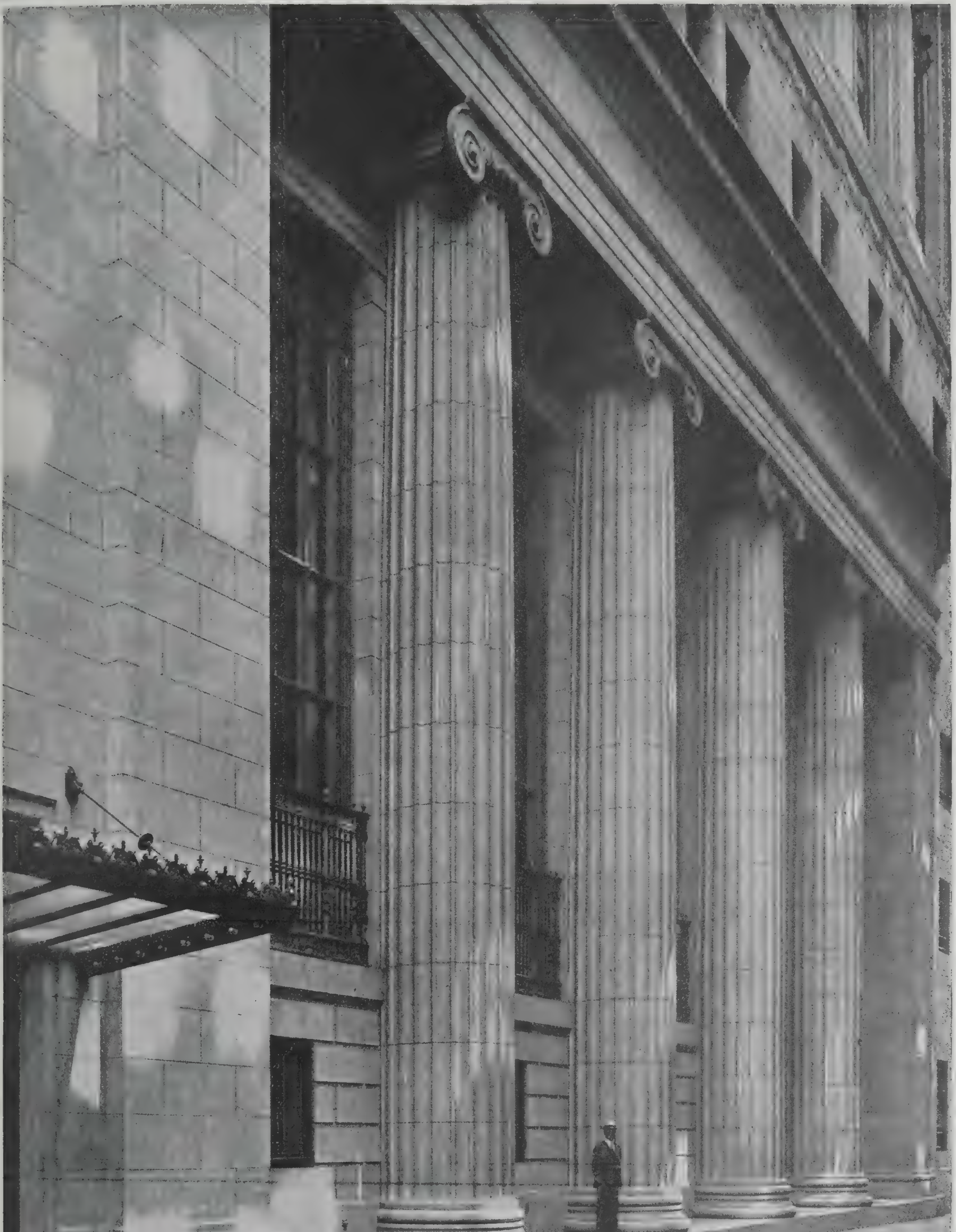
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XV.—BUILDING FOR THE GUARANTY TRUST COMPANY, BROADWAY, NEW YORK.

YORK AND SAWYER, ARCHITECTS.



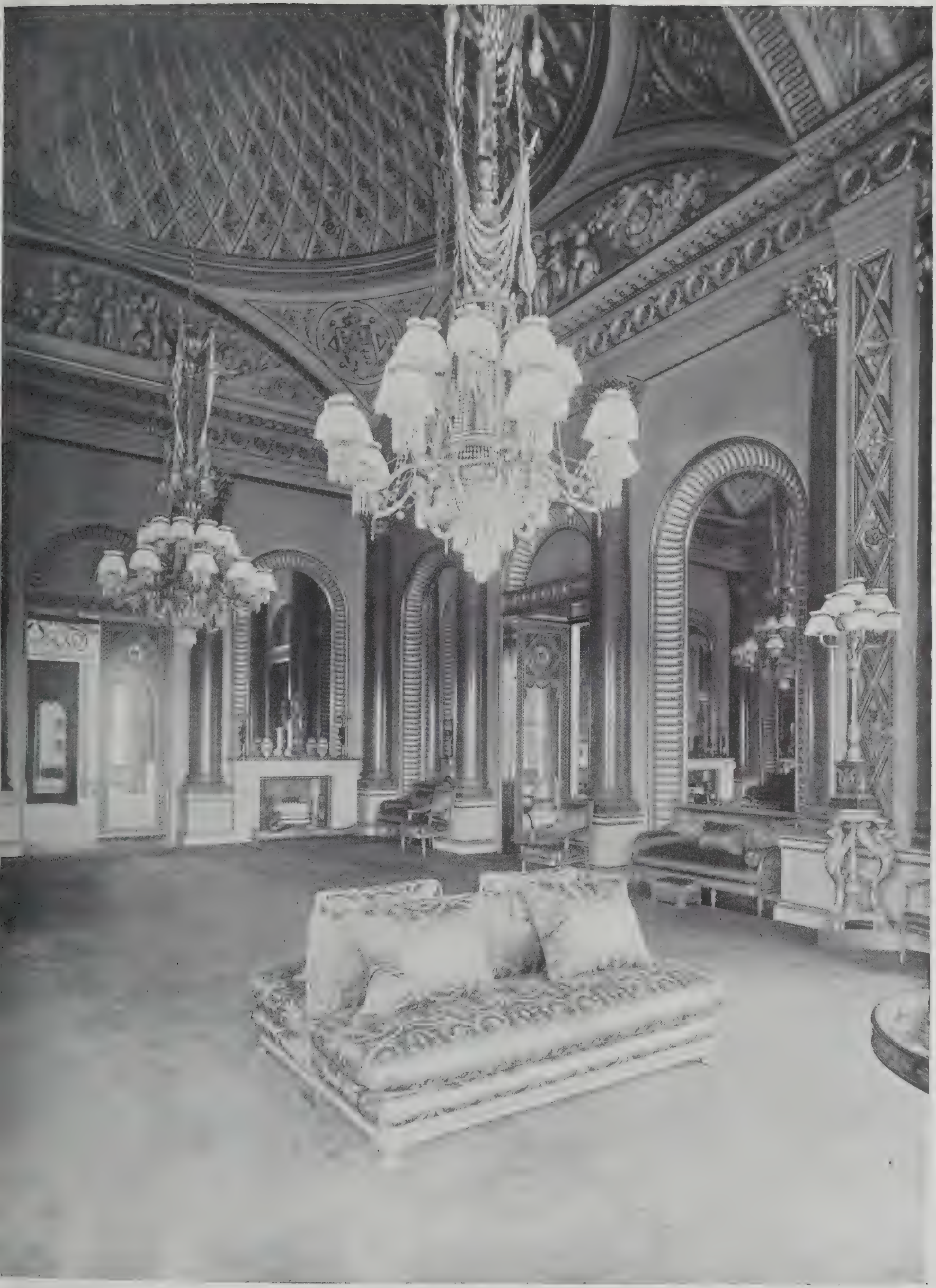
MODERN AMERICAN ARCHITECTURE. I.—BUILDING FOR THE GUARANTY TRUST COMPANY, BROADWAY, NEW YORK: MAIN ELEVATION.

YORK AND SAWYER, ARCHITECTS.

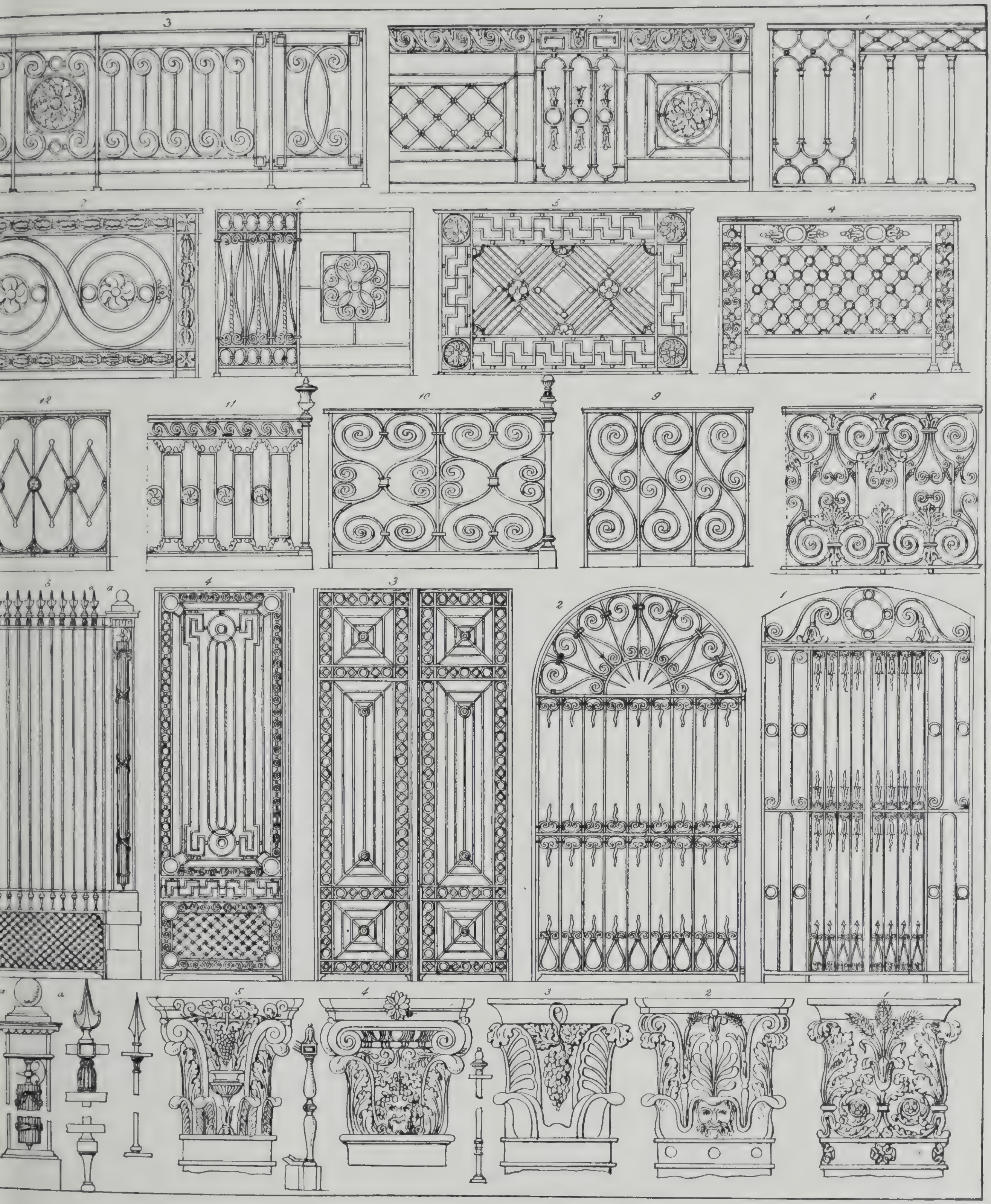


MODERN AMERICAN ARCHITECTURE. II.—BUILDING FOR THE GUARANTY TRUST COMPANY, NEW YORK. DETAIL OF ORDER.

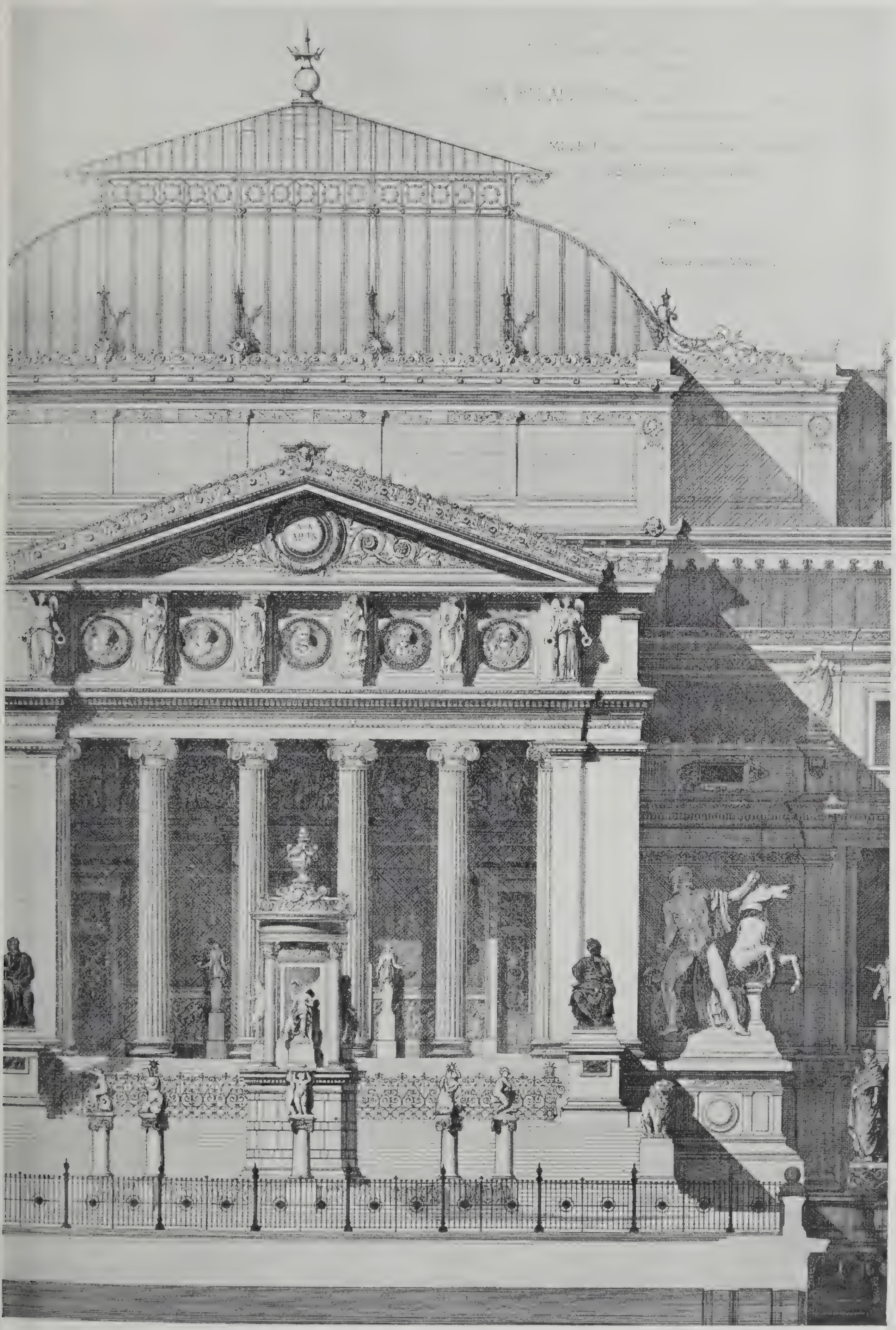
YORK AND SAWYER, ARCHITECTS.



PALACE INTERIORS. I.—THE BOW SALOON, BUCKINGHAM PALACE.

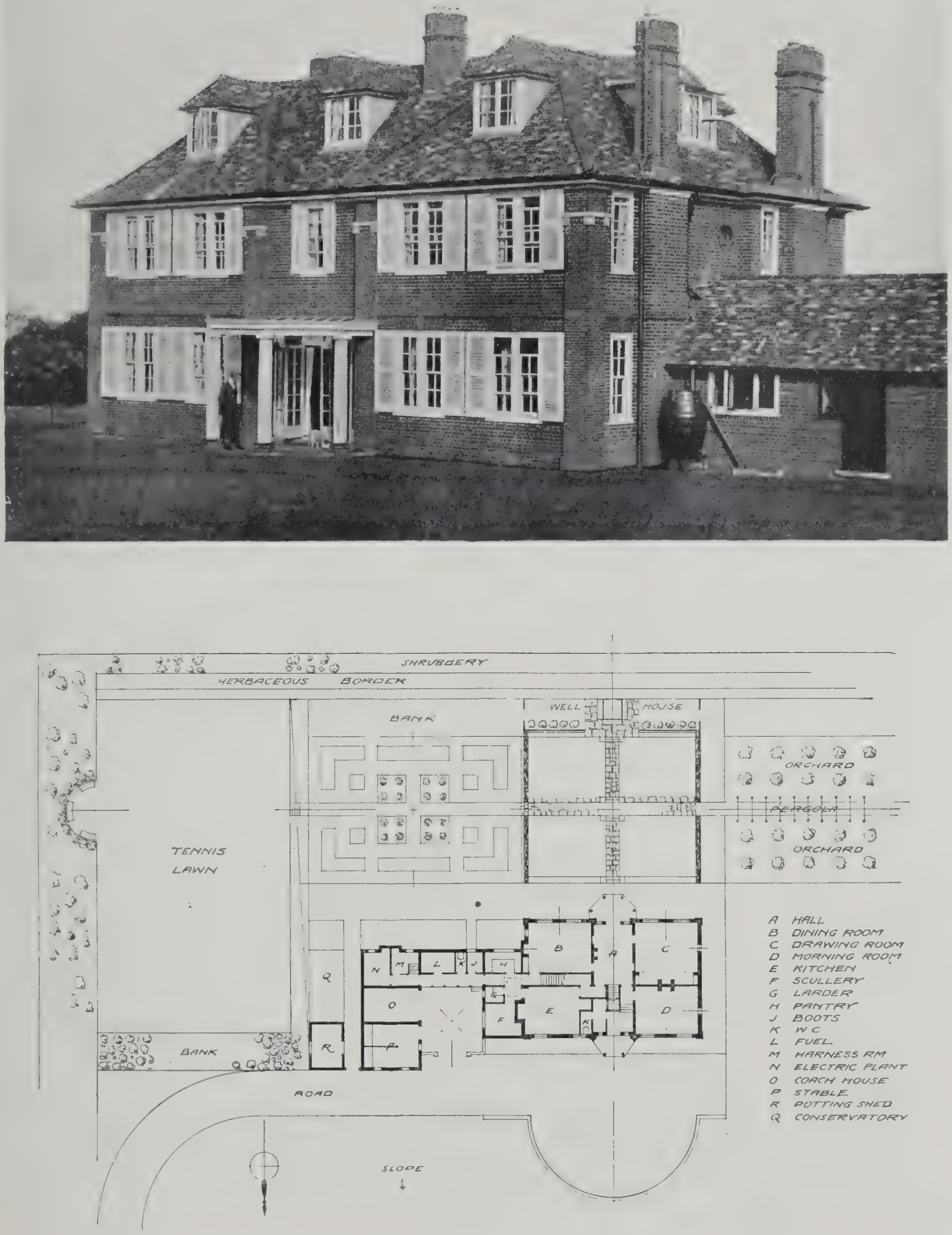


COTTINGHAM'S DESIGNS FOR IRONWORK. II.—BALCONY RAILINGS, GATES, AND CAPITALS.



STUDENTS' DRAWINGS. VII.—DESIGN FOR A BEAUX-ARTS EXHIBITION PALACE: DETAIL OF ELEVATION.

BY EMILE BÉNARD.



MODERN DOMESTIC ARCHITECTURE. XXI.—BLAKEMORE END, LITTLE WYMONDLEY, STEVENAGE, HERTS.

A. NEEDHAM WILSON, A.R.I.B.A., ARCHITECT.

THE ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, February 18, 1914. Volume XXXIX. No. 998.

No. 72.

(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

FEBRUARY 18, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 998.

Jean-Louis Pascal and the R.I.B.A. Gold Medal.

IT is a fitting tribute to one of the most illustrious members of our profession that the Royal Institute of British Architects should have nominated M. Jean-Louis Pascal as the recipient of the gold medal for 1914.

There are people who scoff at all medals, stars, and orders, and contend that the prestige of an artist is not enhanced thereby; but this type of critic completely misunderstands the purpose of such decorations. Nobody will dispute the assertion that they do not in the least degree increase the real worth of him who receives them; they have a certain value, however, in that they are the symbol of public appreciation. There have been men of genius, and some of the greatest prophets must be counted among their number, who were at war with the society they sought to benefit. Naturally they were not decorated; but these have been unhappy exceptions, and it is not just to decry those more fortunate people who have been able to accomplish noble ends without incurring the displeasure of their neighbours. For the gift of persuasion is itself an element of greatness.

The talents of M. Pascal have already received their meed of recognition, for his countrymen have conferred upon him some of the chief honours to which an artist can aspire. So long ago as 1890 he was elected a member of the Institute of France, and in 1903 he was made a Commander of the Legion of Honour. In fact, his long and brilliant career may be regarded as a series of successes which he can hardly be described as having struggled to obtain, for they seem to have been accorded to him as if they were his by right. It has been said that his singular proficiency in the art of teaching was due to a personality of rare charm which inspired the devotion of his followers, and that his leadership of his profession in France is recognised not only by virtue of his accomplished works, but, what is practically a kind of ballot, by the number and successes of those men who seek and profit by his instruction, who desire his judgment upon their works, and who elect him judge or juror to decide between them in competitions.

It may be noted that, while other societies sometimes allow an eminent stranger to become an associate, the Royal Institute of British Architects is the only one which ever confers the highest distinction at its disposal upon a foreigner. In this respect it displays a spirit which is essentially modern. Statesmen and politicians are right in doing everything in their power to foster the sentiment of nationality, but artists, inasmuch as they are concerned with a mode of expression which is fast becoming universal, form a separate fraternity, a republic of their own not governed by the decrees nor influenced by the disputations of civil rulers.

But the decoration of M. Pascal cannot be considered as merely a personal compliment. In a peculiar measure he embodies the virtues which the renowned French system of architectural education is said to inculcate. He, if anybody, can justly be described as a "Beaux-Arts" man, not because he
a winner of the Grand Prix de Rome, and gained
unique distinction of having been "logist" s
times, nor because his numerous pupils have obta
similar honours—these are but the outward signs
tell us nothing of the real qualities of an artist–
because his was the type of talent which devel
most easily in the environment afforded by the Be
Arts School. There he acquired great learning
every student at this institution does, and he wa
happily disposed that the severe discipline he un
went never crippled his imaginative powers.

Among his other gifts may be mentioned the ma
matical. He is a mathematician of conspicuous ab
and he brings to the consideration of artistic sub
the same logical faculty which is needed to gra
with the problems of the calculus. No better exa
of the use of this faculty could be found than in
pronouncements which he made about fifteen
ago upon that much-disputed question of "nation
in art." He is of opinion that the time has pa
when contemporary civilisations ignore even
nearest neighbours. The consequence is there a
materials, no inventions, no new processes of
country that are not immediately known all ove
world and employed everywhere. He says: "
and more will architecture become universal—
will be little besides the conditions of climate
material which will make diversity. Certain prob
whose different terms open the possibility of new
coveries might furnish starting points for intere
combinations; but just as discoveries in scienc
literature, in military and in all the branches of hu
attainment, tend more and more to make uniform
march of progress; just as easy communication
presses more and more the local characteristics w
constitute the physiognomy of all people, and by b
ing them together gives to them the atmosp
of the provinces and to the provinces the
viduality of cities and villages, so archite
from day to day will tend more towards
formity in future solutions"; and again he
"There is no sadness in this thought. The
way is long, and, above all, it is broad,
we may all walk in it—probably in uniform ste
any rate, free and powerful in that vast clearing w
replaces the charming footpaths in which our fa
lingered." Thus M. Pascal braces himself up to
with the new conditions that modern civilisatio
imposed upon our art. Few people can doubt
there is wise counsel in the sentences which have
been quoted, and we shall do well not to be led a
by those short-sighted sentimentalists who bid
become national in our art and ever more nat
The fact is that even in those periods of history
there was no rapid intercommunication betwee
different countries, and when national characte
were for that reason strongly marked, it never occ
to a great artist to be *consciously* national. He
willing to make use of every means of expression
which he was acquainted, and was determined

JEAN-LOUIS PASCAL.
(*Nominated for the Royal Gold Medal, 1914.*)

:t he could in his day, knowing that his nation
:laim it for her own.
; the architecture of our own country will by no
suffer if we obtain a greater knowledge of the
f M. Pascal, and the Royal Institute of British
ects has performed a service by drawing atten-
it in the most conspicuous manner.

Z.

Mr. Reginald Blomfield, R.A.

offer our sincere congratulations to Mr.
Reginald Blomfield on his election to the rank
of Royal Academician. The fact that this
vas more or less generally expected does not
of any significance or impair the gratification
ll be felt in architectural circles, even among
hose views differ widely from Mr. Blomfield's
We need not recapitulate here the buildings
hich his name is identified in order to demon-
he perhaps unique position he occupies in the
f architecture; for that position has long since
knowledged, as well as the circumstance that
s it as much to his brilliant gifts as teacher and
is to his talent as a designer. A fine sense of
proportion, as well as of architectural
les, has enabled him to express to a pro-
that has had to put up with a good
f nebulous and unprofitable writing the

most important truths of principle and practice; his didactic influence is indeed probably unparalleled; and it is in no spirit of flattery, but rather with a grateful memory of his works on Renaissance, especially French Renaissance, architecture, that we record our appreciation of ideas and suggestions conveyed to us through these media. We have little doubt that his vigorous personality will not be long in impressing itself upon that slow-moving body, the Royal Academy. Only recently have the architectural students of the Academy begun to assert themselves, as regards competitions, among those of the younger and more enterprising schools; and the single room devoted to architectural exhibits at Burlington House still remains an object lesson in uselessness and effete conservatism. A big educational work lies ready to the Academician-architect's hand, and Mr. Blomfield is quite the man to take it up. For the time being, however, other and even more important work lies nearer to his hand. Sagacity, strength, commanding ability, and professional standing, alike mark him as pre-eminently the man who can be confidently depended upon to steer the R.I.B.A. charter changes to a successful issue, and to this end we regard it as of vital importance that he should by all means be urged to accept a third year in the presidency which he holds with so much dignity and distinction.

London County Council and Open Competition.

IT was with much pleasure that we made, last week, the announcement that the London County Council Education Committee is inviting competitive designs for two new schools. This new departure introduces a policy that for years past has been steadily advocated in this Journal; for it has always seemed to us that such utilitarian advantages as may be assumed to attach to the designing of the elementary schools of London, or of any other town, by an official staff must, in the nature of things, be greatly outweighed by the æsthetic and other considerations arrayed on the other side of the argument. The chief objections to an official or departmental system in general or anywhere (and we are briefly restating the case, as a matter of broad general principle, without specific reference to the London County Council, which body, indeed, has been and is being singularly well served by a most able staff of architects) are that it tends to discourage originality and to produce, more or less perfunctorily and mechanically, a constant succession of stereotyped forms to which there is the strongest temptation to adhere because they have been officially approved. Such a system cannot be good for architecture. Every building should express not merely its purpose, but its author's individual method of indicating that purpose; otherwise it must be dull and lifeless. Another important consideration is the value of competitive stimulus. An official department, consciously or unconsciously "playing for safety," yet secure from competition, will naturally and almost necessarily go on indefinitely and monotonously repeating itself, with no marked effort, and with no impelling motive, for further or higher development, or for any observable degree of variation in type or detail; whereas open competition fosters exactly opposite proclivities. It is for these reasons, and for others which need not be recapitulated, that we welcome the new departure of the London County Council Education Committee, and we can only trust that the new policy will be fully justified by the event. In any case the Committee will still need the services of its very competent architectural staff; but if the open-competition experiment prove successful, the staff will be relieved of an unfair burden, outside architects will enjoy enlarged opportunities, and London's elementary schools will gradually assume a greater diversity of design than could be reasonably expected under the old system. It is apparent, however, that the Council's object in instituting these competitions is economic rather than æsthetic. It is anticipated that open competition will afford the means of comparing the cost of different types of buildings, as well as of ascertaining what possibility there may be of adopting new methods of planning; and possibly when this object is thought to have been served, competition will be dropped. It may be noted that no employee of the Council will be allowed to compete; but we are rather inclined to think that, on the whole, it would be better if members of the architectural staff were not thus debarred. They are in possession of a most valuable fund of practical experience, and the stimulus of competition would enable them to turn it to fresh and profitable uses, and it would seem to be no more than fair to give them this larger opportunity.

The London Lockout.

THE past week has yielded but little of interest to record concerning the trouble in the London building trade. Not but what there has been a good deal of talk on both sides, but it amounts to little more than verbiage. In fact, more is to be inferred from its tone than from its substance; for, reading between the lines, one may pretty safely conclude that both sides are anxious for a cessation of hostilities that have too little point and purpose to justify their ruinous prolongation. Apparently the employers remain obdurate in their demand for some tangible guarantee that working-rule agreements shall not be broken, while the unionists seem equally determined to give no hostages to fortune. In our opinion, the formation of a guarantee fund is not a practicable proposition, and the unions will never agree to it. If the employers have the magnanimity to withdraw this demand, as well as the peace-and-penalty document, upon the signing of which, we understand, they will not insist providing satisfactory guarantees are forthcoming, and if the unions will, as a fair *quid pro quo*, renounce their rather exacting claim for recognition of the Federation, the way will be cleared for calm consideration of the cardinal point of the dispute. Both parties being by this time sadder, and it is to be hoped wiser, for their chastening experience of the ruinous cessation of work, it should not be difficult, at the joint conference which, at the instigation of the Parliamentary Labour Party, seems, at the moment of writing, likely to take place immediately, to arrive at a settlement which shall be mutually honourable rather than humiliating to either side.

Public Spirit and Private Houses.

SIR LAURENCE GOMME, who has resigned his post of Clerk to the London County Council after thirteen years' service, has always taken a special interest in London architecture, and has noted in recent times the quickening of the public interest therein. With a knowledge of London extending over forty years, he has naturally witnessed many architectural changes—as a result of which he has come to the conclusion that the "amenities" are being enhanced every year. Most of us are optimistic enough to have arrived at the same conclusion; and modern London architecture, with all its vices and incoherence, undoubtedly reflects a vast modification in the public attitude, which is all for the better. But we cannot quite follow Sir Laurence when, if correctly reported, he speaks of this new public interest as a "return" to the mediæval citizen's point of view. It is very doubtful if the mediæval citizen in adorning his home externally had any thought of his duty towards the public; in this respect he was very far removed from the well-to-do gentleman who erects his domestic building, designed according to the best he thinks money can buy, with the quite conscious knowledge that he is doing a good turn to the neighbourhood. There may
be some question as to the precise point of view of
mediæval citizen in regard to his private dwelli
place; but it can hardly be disputed that the "pu
view of private buildings," as we understand it, belo
exclusively to the present age as a product, maybe
the new communistic sentiment that is slowly
surely winning ground from an individualism in
turn as gross, if of a different pattern from that of
Middle Ages, as any that ever existed.

The Cheapening of Cottage Property.

A WORD in season as to the current craze
cheapening cottage-building is to be found
the annual report, presented yesterday, of
Garden Cities and Town Planning Association.
are glad to notice that the Association "is strongly
opinion that the cheapening of cottage property sho
not be effected by cutting down the standard of
space requisite for the proper health of the family.
limit has already been reached, and further reduct
will be at the expense of the health and good citiz
ship of the race." Much the same warning has b
put forward very frequently and very earnestly in th
columns. It is obvious that, as a result of centuries
neglect, the problem of housing the workers
become so desperately urgent that Governm
Departments as well as local authorities and priv
owners are seeking rather desperate remedies; a
as we have previously taken occasion to point
official connivance at minimum accommodation
suggestion of cheaper methods of building, toget
with a general disposition to relax or to abolish
laws, are apt to be dangerously misconstrued as sa
tioning a lower standard than is really warranted
intended. We are glad, therefore, of the Associatio
energetic, opportune, and most necessary protest
which we have much pleasure in giving furt
publicity.

Parochial Jealousies.

A MOTION in favour of building cottages
workmen has been opposed on curious grou
at a meeting of a certain Urban Council in
North. It was argued that as many workmen liv
in the area were working outside it, the outside
tricts ought to provide the housing. This ingeniou
parochial argument was neutralised by the observat
of another councillor that also there were many
working within the district who were living outsid
Honours would be divided but for the considerat
that the odd trick was certainly trumped by
councillor who held the larger view of give-and-ta
It is plain from the incident, however, that
inveterate idea of the parish as an isolated, self-c
tained, self-conceited, and altogether supremely sel
unit—an archaic survival of feudal communalism
dying very hard, and has still to be reckoned with
an enemy to amelioration, to which it is invaria
opposed. Nor is this obstructive and reaction
spirit wholly confined to the rural outposts and hin
lands. Borough councils have been known to harb
it, as when two of them have opposed a tramway
for no better reason than that a third, their dear nei
bour, has strongly supported it. Water supply
been subject to the same local jealousies; and th
can be but little doubt that this dog-in-the-manger
position has been not the least of the several influen
which have induced the Government to turn th
attention to rural housing. It has been also poten
the genesis of the Town-planning Act and of the R
Board; and while such negative influence may be
(though there be those that doubt it) to illustrate
paradox that "out of evil cometh good," it shows
more unmistakably that obscurantist antagonism
reform is as ineradicable as original sin.

URRENT VIEWS ON RIGHTS OF LIGHT.

RIGHTS-OF-LIGHT cases have happily grown
much less frequent of late, clearly as a result of
the House of Lords judgment in the celebrated
ise of Colls v. Home and Colonial Stores. It may be
sefully recalled that in supporting the Lord Chancel-
r's (Lord Halsbury's) judgment in that important
ppeal, Lord Lindley said, "It is by no means to be
ken for granted that a person who wants an extra-
dinary amount of light for a particular business can
aintain an action for diminution of light if only his
ecial requirements are interfered with." Before this
inciple was thus made perfectly plain, the ease with
ich injunctions and damages were sought, and too
ten obtained, on the slightest pretext of diminution
light, had put a premium on litigiousness, and made
e builder's life a burden.

Some of the old-time abuses were pointedly
posed by Lord Macnaghten, who, in delivering his
dgment in the same appeal, made the following
astic general observations: "The Court ought to be
ry careful not to allow an action for the protection
ancient lights to be used as a means of extorting
oney. Often a person who is engaged in a large
ilding scheme has to pay money right and left in
der to avoid litigation, which would put him to even
eater expense by delaying his proceedings. As far
my own experience goes, there is quite as much
pression on the part of those who invoke the
sistance of the Court to protect some ancient lights
ich they have never before considered of any great
ue as there is on the part of those who are improving
neighbourhood by the erection of buildings that
st necessarily to some extent interfere with the light
adjoining premises."

This, of course, was a general reference, having not
slightest bearing on the merits of Colls v. Home
d Colonial Stores; but, as a direct and natural
ult of these several clear and authoritative pro-
uncements, "speculative" litigation became very
requent; and, indeed, rights-of-light cases are now
rare that one rather suspects the suppression of
uine grievances, or that, alternatively, they are
anged on terms that, on prudential considerations,
made comparatively easy, both sides realising that
s better to keep the matter out of court than to run
risk of expensive defeat where the issue depends
inly on a judge's opinion or estimate of "material
inution of light." Consequently, the comparatively
cases that now come to trial are usually quite
uine, and are therefore the more interesting and
portant.

Three points of considerable significance were
tested in an indisputably genuine case that is
orted in the present issue. First, it may be noted
guidance that although a mandatory injunction was
ised, the judge hinted that an interim injunction
ht have been obtained at an earlier stage. Rightly
ugh, judges are usually reluctant to grant a manda-
injunction that would involve demolition where
cution might possibly have been prevented. Then
e arose the usual difficulty of assessing the amount
he damages. It was solved rather ingeniously by
rding the rate of £20 a year for the seven years
a half that plaintiffs' lease had yet to run, the lump
amounting, of course, on a simple computation, to
o. A third point, which was raised in the defence,
that, by agreeing, in 1911, to certain alterations
ired by the freeholder, the plaintiffs had
ndoned their easement of light. This contention
not upheld. While it is neither necessary nor
rable to comment upon the merits of this particular
, we have felt justified in drawing attention to it for
light as it may be assumed to throw on the modern
d of judicial opinion in such matters.

THE PLATES.

The Four Courts, Dublin: Centre of River Front.

NO apology is needed for publishing one of the best known and most impressive of James Gandon's buildings. The building stands on King's Quay, on the site of the ancient Dominican Monastery of St. Saviour, and was erected some few years prior to 1800, at a cost of £200,000. It is one of the three Dublin buildings with which Gandon is prominently identified, the other two being the well-known Custom House and King's Inns. The Superior Courts are held here at the present time.

Monument "To the Heroic Dead of the Fire Department," Riverside Drive, New York.

Partnerships between architect and sculptor have had some of the happiest results in the States. For example, the art of St. Gaudens was shown to best advantage by the architectural setting of Stanford White, and similarly, the fine designs of Mr. H. van Buren Magonigle, the architect of this memorial, is considerably enhanced by the sculptor, in the round and in relief. The character of the sculpture suggests the name of Mr. Attilis Piccerilli, who was associated with Mr. Magonigle in the National Maine Monument in the Central Park.

Horn Park, Beaminster, Dorset.

This house is built on the southern slope of a hill, about seven miles inland from Bridport, and is approached by a drive a quarter of a mile long. The gardens consist of some seven acres. Water supply is obtained by gravitation from a well on the hill above. The plan was arranged to take the greatest advantage of the view across country to the sea, and the entrance at the side was conditioned by the position of the approach. The house is built of local stone, golden yellow in tone, with Ham stone dressings and tile roof. Mr. T. Lawrence Dale, A.R.I.B.A., London, was the architect, and the general contractors were Messrs. Jesty and Baker, of Castletown, Portland.

Cottingham's Designs for Ironwork: Piers and Lamps for Gates and Palisade Fences.

Some of Cottingham's most successful work as a designer was done in connection with the above subjects for translation into cast iron. The lamp designs represented here are specially remarkable for their originality and grace.

Apartment Building, Avenue de Breteuil, Paris.

The treatment of a corner site is always an interesting problem. In this case it has been solved in the main successfully by the architect (whose name is unfortunately unknown to us), with a due regard to the purpose of the building as an apartment house, which necessitated the somewhat extensive employment of balconies.

Student's Drawing: Design for a Civic Centre.

This is one of the designs for the Rome Scholarship Competition, by Mr. Louis de Soissons, who, it will be remembered, was awarded the Jarvis Studentship. The plan is of exceptional merit and interest. The idea of the "Civic Centre" as the solution of the problems presented by the architectural desires and necessities of municipalities, has been much discussed of late, and may be said to be gaining ground.

Working Drawing: National Museum of Wales, Cathays Park, Cardiff: Details of Court-Room Staircase, etc.

We publish this week another of the fine series of working drawings prepared by Messrs. Smith and Brewer for the above building. The first of these drawings was published in our issue of October 1, 1913. They are made, as will be seen, on the American system, which shows every detail of construction and material.

HERE AND THERE.

IF I were writing in the 'eighties, even with the prevision of a prophet, I should hesitate to touch such a subject as the manufacture of Old Sheffield Plate, because, though genuine specimens of a practically extinct art are now eagerly sought, and secure, in the sale-room and in the collectors' shops, prices which are many times the original value, the art dictators of a former generation had decided in their own minds that Old Sheffield Plate was not a thing to admire at all. But, since succeeding years have witnessed so astonishing a change of outlook, I need make no apology for dealing with the subject now, more especially as architects have a fancy for such things. I often see an old candlestick standing proudly on the office mantelshelf; moreover, I can bring forward a genealogical fact which gives me double warrant for my present diversion. Thomas Boulsover was the inventor of Old Sheffield Plate. He was busy with his new process about 1743, and there is Mr. J. B. Mitchell-Withers alive to-day as his great-great-great-grandson. Mr. Mitchell-Withers is a Fellow of the Institute, and a Past-President of the Sheffield Society of Architects and Surveyors; which admirable connection between Old Sheffield Plate and English architecture gives me a firm basis to proceed from.

* * * *

We have all admired those graceful candlesticks, those beautifully finished bowls and trays, and the rest of the domestic garniture which gained such a reputation, but I think it will be news to many of my readers if I describe precisely how Old Sheffield Plate was made. How Thomas Boulsover happened upon the idea is not exactly known. We learnt in our youth of James Watt and his boiling kettle—which gave us the steam engine; and of Senefelder and the washerwoman's bill he chanced to put face down on his stone—which gave us lithography. Some such story is told about Thomas Boulsover having a penny and a piece of silver together in a vice, but whether this be true or not is of no importance to my present purpose. The essential fact is, that it was the fusing together of copper and silver that made the Old Sheffield Plate industry. We live in a world of progressive imitation, when the costly substance is constantly being replaced by something less costly. The old silversmiths wrought their precious metal into objects of their trade, and those people who were rich enough were able to buy them. Hence it is not surprising to learn that when Thomas Boulsover's invention was evolved, and began to be extensively developed by Joseph Hancock—at one time Boulsover's assistant—the silversmiths were up in arms, and tried to get a law passed prohibiting the goods as spurious. However, that proved futile enough, and the industry proceeded to make the fortune of many men for a hundred years, until electro-plating—a still further example of substitution—was discovered in England about 1840, and forthwith killed the older industry.

* * * *

With this preface, we may go into the details of manufacture. First we may note that from very early times it was a familiar practice to cover baser metals with precious ones, a practice which came to be known eventually as "close plating." This last consisted in dipping the piece of metal to be plated into a bath of sal ammoniac and then into molten tin, putting a piece of silver foil on top, and fixing the two together by passing a hot iron over the surface of the silver. Old Sheffield Plate was a development of this practice, with a new invention superadded. It was made in this wise. A copper ingot about 8 in. long, 2½ in. wide, and 1½ in. thick, was first prepared, its surface carefully planed, filed, and scraped so as to make it dead level and true. A sheet of silver about ⅛ in. thick, b
slightly smaller in area than the face of the ingot, w
similarly prepared, and laid on the copper. The tw
were then hammered together (in later times press
together by a hydraulic press). The silver surfa
was then dressed with chalk, and a copper plate w
laid on the top of it. Next, this metal sandwich—com
prising ingot, silver, and copper plate—was bou
together with iron wire, and, after the sides had be
dressed with borax, the whole was put into a sm
coke furnace. Here it remained until the copp
began to "weep," and the two metals were fus
together; at which precise moment the ingot was wi
drawn with a pair of tongs and allowed to cool. Ve
careful watching through the spy-hole in the furna
door was needed at this stage of the process, the ing
having to be withdrawn at the critical moment, neith
too soon nor too late, for in one case the metals wou
not be fused together, and in the other the silver wou
have run. When cool, the ingot was unbound, t
copper covering plate removed, and the ing
thoroughly cleansed by being dipped in acids a
scoured with sand and water. It was then roll
out to the requisite gauge, and the peculiar po
to notice is, that the silver and copper rolled o
together in exact relative proportions of thickness.
is this fact that made Old Sheffield Plate possible, ju
as the rate of expansion and contraction being t
same for both steel and concrete has made reinforc
concrete possible. The duplex sheet (or, when t
plating was done on both sides of the ingot, the trip
sheet) was then worked up into the desired for
Enrichments were added by being cleverly solder
on, and by pressing the metal in steel dies, such artic
as candlesticks being made up of several distinct pa
soldered together. The article was then finished
chasing and burnishing.

* * * *

Such was the process of manufacture. It is go
out of vogue these many years, but is not a lost art,
Mr. Frederick Bradbury—than whom no one can f
nish more reliable particulars—assures us that a lar
number of the old dies remain in existence
Sheffield, while the mills still roll out the she
of fused silver and copper as of yore. Workm
there are, too, who can undertake the diffic
process of soldering on silver mounts, rubbing
silver shields, and applying delicate silver edges.
the industry in its old form seems doomed never to
resuscitated commercially. "We live," as Mr. Bra
bury says, "in an age when people who purcha
plated wares inquire for them in their cheaper form
And while I am resting on Mr. Bradbury's author
let me give his test for Old Sheffield Plate: it m
prove of service to some readers. It is necessary, ho
ever, first to point out that the silver which was us
in the industry was slightly alloyed with copper,
the same proportion as standard silver, that is, 75
925 parts; whereas, in the case of electro depositi
the silver is always pure. Here is the test for the c
or the other:—Apply to the article to be tested nit
acid slightly mixed with pure water, judgment bei
used not to leave the acid on long enough to penetra
to the foundation metal. A moment will suffice
dissolve the silver slightly on the surface. Put the c
tilled portion into a wine glass, and add a few drops
ammonia. If the mixture shows a distinct blue colo
this indicates the presence of alloyed silver—and y
know you have the genuine Old Sheffield Pla
Should the colour be clear, it may be taken for grant
that the silver is pure, and therefore deposited by t
process of electro-plating: in which case it is Sheffie
atte-Birmingham.

Ubique

GEORGIAN DUBLIN.

BY PAGE L. DICKINSON.

Ireland, owing to the social conditions, there is little architecture of much interest, excluding of course ecclesiastical work, till the eighteenth ury. There are a few good seventeenth century es, but nothing of importance in comparison with t we have in England. I propose to confine elf here to eighteenth century Dublin.

me few years ago a society called the Georgian ety was founded in Dublin. I have the honour e one of the original committee. Its object was btain and preserve records by means of photo- hs, measured drawings, and historical notes of the cipal buildings of the period, many of which, owing e exigencies of public life and social changes, were ly disappearing. Members, and members only, entitled to receive copies of the annual volume cords. It was intended to complete the survey in volumes. The first four of these have been pub- d, and have met with very wide appreciation. The volume is now very difficult to obtain, and has risen lue to many pounds.

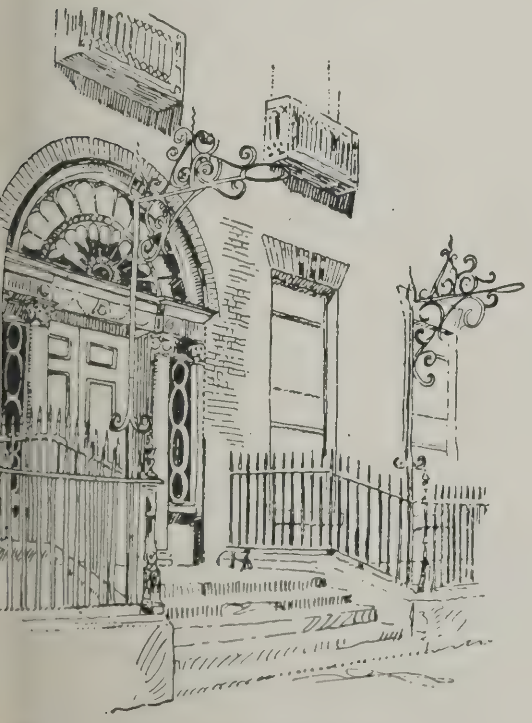
mention this society because I have very largely n from its publications for the matter of my paper. h especially to acknowledge my indebtedness to McDowell Cosgrave, who is one of the highest orities on the history of Dublin and a most active er in the society.

is interesting to note that at the close of the eenth century both sides of the city were equally onable. I find at the time of the Union there forty-five peers resident in Dublin—twenty-three e north and twenty-two on the south. Some of the lived in Harcourt Street and St. Stephen's Green. e is an interesting story told in connection with f the latter houses. A certain notorious person— Whalley—built a house in Stephen's Green and to Lord X. at cards. Several years afterwards ley inherited a fortune and tried to buy back his . Lord X. would not sell. Whalley immediately red the adjoining site and built an enormous house which entirely eclipsed that of the unfortunate peer. These buildings are now part of the National University.

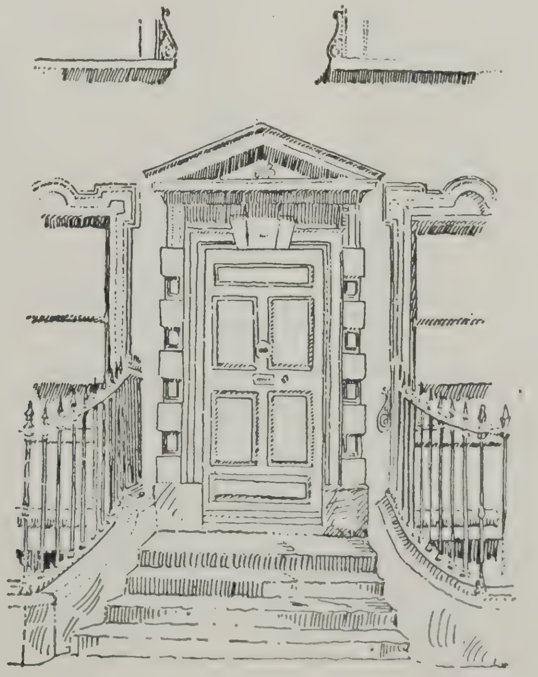
To turn to the architectural aspect of this subject, we architects of Dublin are exceedingly fortunate in having such a splendid measuring and sketching ground at our office doors. I take the subject of doorways alone to illustrate our wealth of work. I had the pleasure last spring of assisting an old member of the A.A.I., Mr. Geoghegan, in writing an exhaustive essay on this subject. Simplify it as he would, Mr. Geoghegan found it impossible to reduce his types or groups of eighteenth century doors to less than about twenty. These were divided again into numerous subdivisions, and what I may term "freak" specimens. I venture to state that there were at least ten doors on an average in each type that were worth measuring, which gives us a rough total of about 200. What Italian city could show more?

The earlier development of the town was westwards. It is here we chiefly find examples of the old gabled houses—"Dutch Billy" houses, as they are often called in Dublin. Then, as the river became enclosed and the quays built, the course of building followed the reclaimed land, moving eastwards towards the sea. Then came the bridges, and as each new bridge was built the Custom House moved down the river, so that the shipping would reach it on the open. Generally speaking, building followed the bridges; that is, the new bridges opened up new building areas. But in the case of Carlisle Bridge, now O'Connell Bridge, this followed the extension of Sackville Street, and the opening of Westmoreland Street. By the way, the proposed site for the picture gallery, now, alas! lost to the city, was immediately above this point.

A great number of the large and important Dutch houses built about 1713 were demolished in 1813, but there are still some very interesting examples remaining. These houses were built by Huguenot settlers, who came in large numbers to Dublin in the



DOORWAY, 53, MERRION SQUARE, DUBLIN.



DOORWAY, 41, ST. STEPHEN'S GREEN, DUBLIN.

early years of the century. One of the oldest now standing is, perhaps, that in Bride Street. The house has been much altered.

Bride Street, we know, existed as early as 1677, from an advertisement of that date, which has reference to a young lady who eloped from Bride Street with one-third of her fortune of £1,600. We who know Bride Street, with its tenements, at the present day, can easily understand the young lady's desire to abandon it even if forced to leave the cash behind.

Digges Street also has some good examples of this type of house. Many of the old gables have disappeared and have been replaced by the dull city parapet. But the old Dutch houses are easily recognisable by the absence of reveals to the windows, the angle fireplaces, the panelled walls, and the long narrow doors. In "Evelyn's Diary" of 1670 we read:

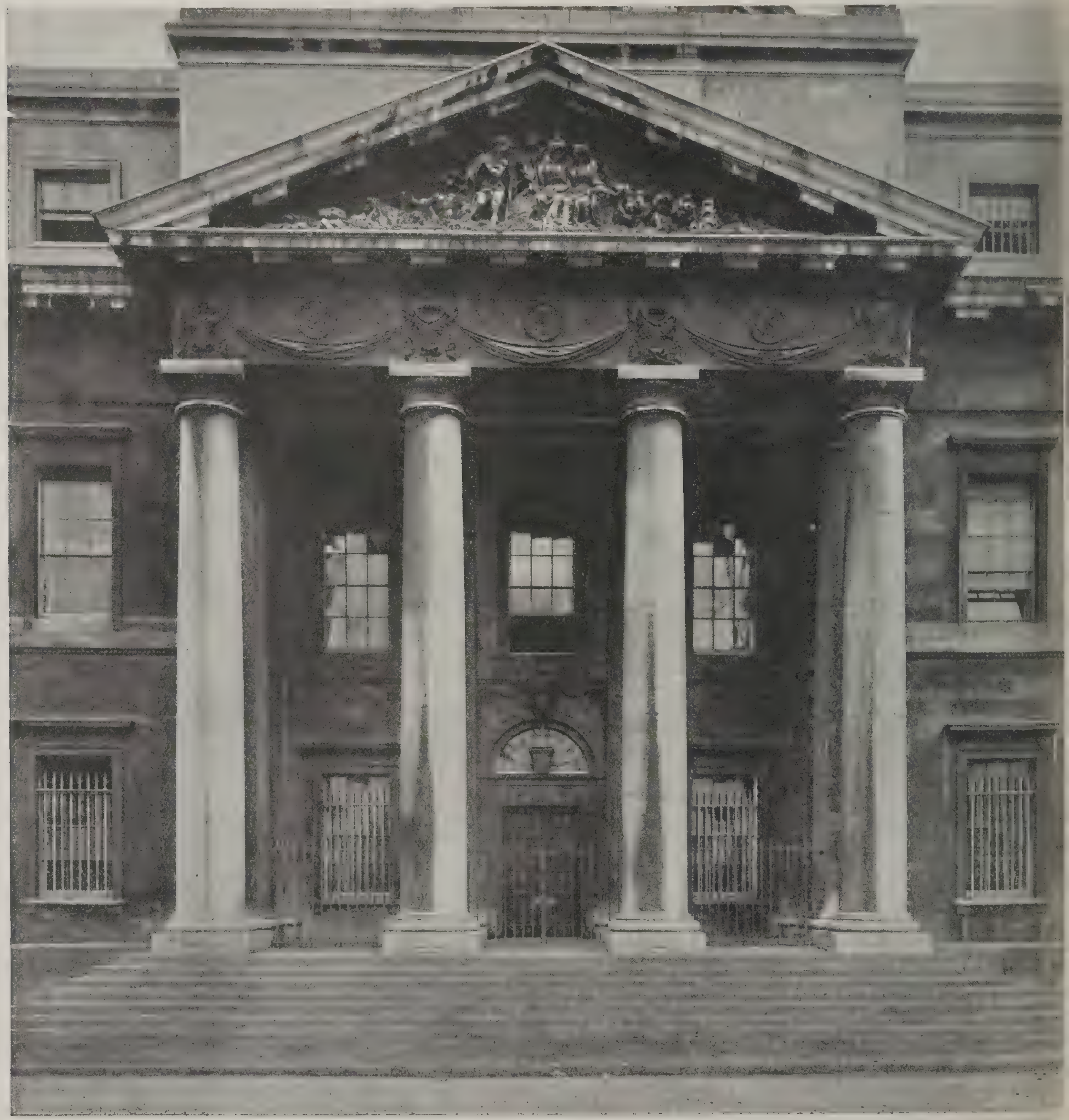
"Many of the rooms above had chimnies placed in the angles and corners, a mode now introduced by His Majesty which I do at no hand approve of."

In the second half of the century, building taste followed England with its Renaissance influence, and many notable buildings arose. St. Thomas's Chu
was built, and also St. Catherine's from the desi
of one Smith.

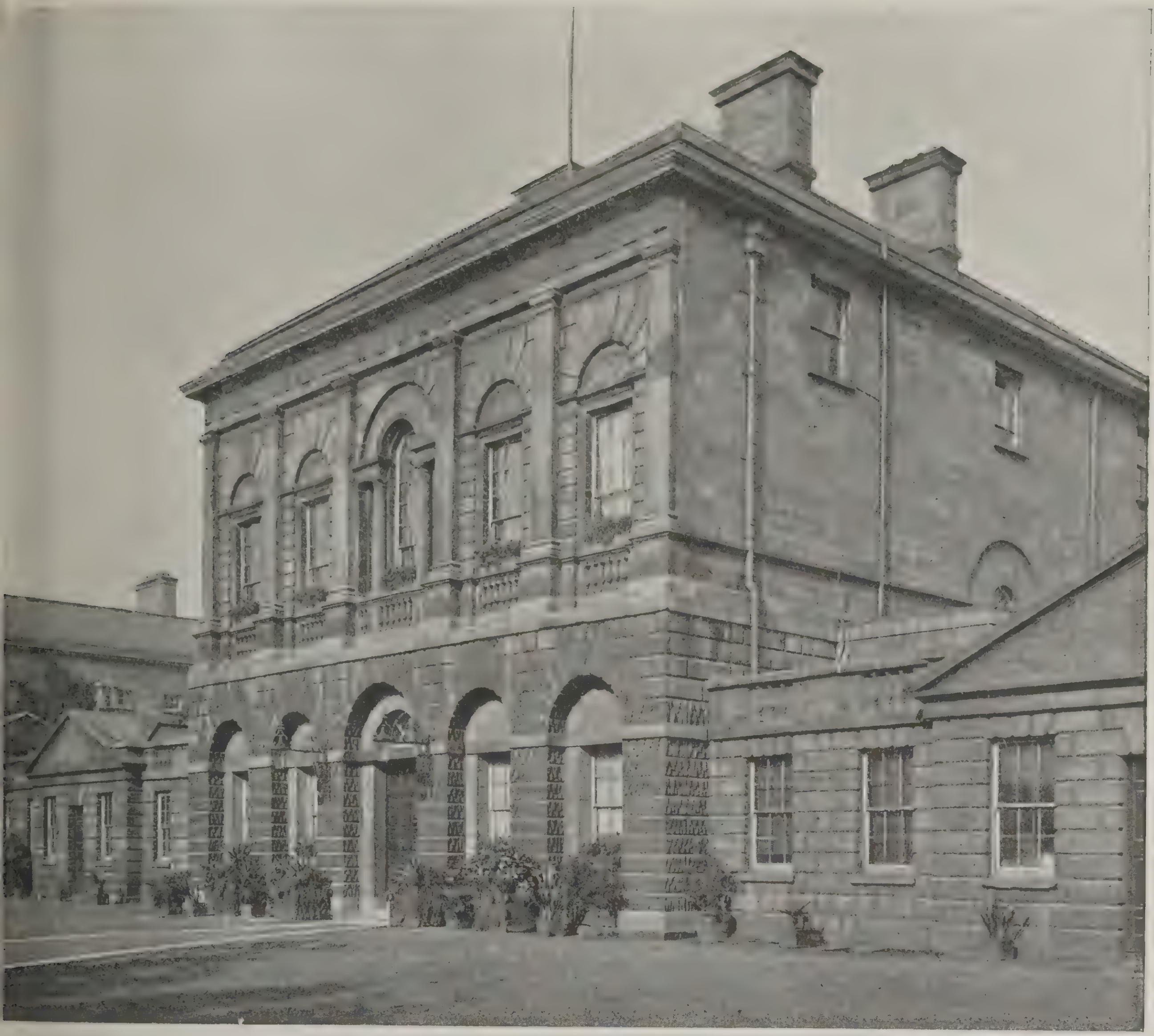
Perhaps the most noble building in all Dublin
"The Parliament House."

It was built in 1735, "in the true Italian taste,"
a contemporary expressed it. A Captain Pierce
Government official, is supposed to have supplied
design (at any rate, there is a record that he was p
for it). I think this must have been a case of a gho
In the year 1760 we find a record of a rumour that
design was Gandon's. The first building compri
the centre block and east and west porticos. Gan
certainly designed the east screen walling and
Lords' entrance. Parker carried out the west scr
wall.

The building is nearly semi-circular, and covers
acres. The principal front faces College Green,
consists of a grand Ionic colonnade 147 ft. l
occupying three sides of a courtyard; the columns
lofty, and rest on a flight of steps continued round
courtyard and to the extremities of the colonna



THE CUSTOM HOUSE, DUBLIN: DETAIL OF MAIN PORTICO. JAMES GANDON, ARCHITECT.



THE PROVOST'S HOUSE, TRINITY COLLEGE, DUBLIN. JOHN SMYTH, ARCHITECT.

re are the entrances under two lofty archways. four central columns are advanced and support a iment with the royal arms in the tympanum and a re of Hibernia on the apex, with Fidelity on her t and Commerce on her left. The royal arms and res are the work of E. Smith. He was paid £450 executing the figures and Flaxman £1,137 for lelling them.

he east front consists of a large gateway, and, de it, a noble portico of six Corinthian columns, Fortitude on the apex of the pediment, Justice g on her right and Liberty on her left. These res also are by E. Smith. The use of Corinthian rs in this portico has been much criticised. The tion said to have been given by the architect at the of their execution in answer to a bystander who d him, "What Order are these columns?" is—"It very substantial Order, for it is the Order of the se of Lords."

he real explanation is, that the ground fell to the , and so a different Order had to be adopted to d the use of pedestals, which the Ionic Order would necessitated. The portico harmonises well with opposite corner of Trinity College, when seen ugh Westmoreland Street, which was laid out when portico was built.

ublin in the early part of the century represented xtraordinary mixture of wealth and culture and rance.

We read that pigs and cattle were a menace to people using the leading thoroughfares. Even late in the century it is recorded that an "ingenious gentleman was engaged on devising a meat machine to entrap pigs in the street alive, because the natives who let them out so grease their tails that they cannot be caught. The usual method at that time was to engage a halberdier, whose duty it was to kill or maim any pigs he could reach." Footpads and thieves flourished; constant hanging seemed to have had little deterrent effect. In 1743 we read of a coachman who was beaten to death in College Green by three young men, who escaped. Hanging, or flogging at the cart's tail, were the usual punishments. The place of execution was within 100 yards of St. Stephen's Green, familiar to visitors now in connection with the Shelbourne Hotel.

Dr. Mahaffy, commenting on the state of the town, says:—"If we wonder at the juxtaposition of savagery and civilisation it is well to remind ourselves that the life of all beasts of prey is cruel by nature, and that man is one of the worst of them."

Leinster House.

Of the Dublin mansions, the first is Leinster House, now the home of the Royal Dublin Society. It is perhaps the finest of our Georgian mansions. It is in plan a country house, and, indeed, when it was built it was on the outskirts of the city, commanding from its back windows a view of Dublin Bay.

James Fitzgerald, twentieth Earl of Kildare, built the place in 1745. It was then known as Kildare House, as the Dukedom of Leinster had not yet been conferred. The Earl was quite a young man when the building was begun, but he had travelled much. His architect was Richard Castle, the great architect of the day, whom Sir Gustavus Hume had brought over from the Continent. He designed many important Irish mansions. It was Castle's predilection for a country home, and his employer's desire for a town residence, that led to a compromise by the selection of a site bordering on the town—one likes to see an architect with a "stiff lip"—and so the house was built in Molesworth's fields. It has often been contended that architects should sign their buildings as painters and sculptors do. Richard Castle did this and I give the translation. The inscription is in Latin on the foundation-stone:—

"The house, of which this stone is the foundation, James, twentieth Earl of Kildare, caused to be erected in Molesworth's fields, in the year of Our Lord 1745. Hence, learn, whenever, in some unhappy day, you light on the ruins of so great a mansion, of what worth he was who built it, and how frail all things are, when such memorials of such men cannot outlive misfortune. By Richard Castle, architect."

The Provost's House.

Few of the great houses in Dublin have undergone so little change or whose history are better known than the Provost's House in Trinity College, built in 1758. The new west front of the College was building at the time, and Provost Andrews decided that his new home should be worthy of it. So he persuaded the board to reproduce the design of the residence of General Wade in Burlington Street, designed by a famous amateur architect, the Earl of Burlington and Cork, in 1773. The drawing of the plans and the superintendence of the work was placed in the hands of Mr. John Smyth, and his fee was £22 15s. He was a well-known architect, built St. Thomas's Church, and rebuilt St. Catherine's Church.

The bedroom accommodation is very poor. This is explained by the fact that Provost Andrews was by force of the College Statute a bachelor. It required a special dispensation from the Crown to admit Hely-Hutchinson, a married man, to the Provostship. He made some additions.

No record of Dublin in the eighteenth century would be complete without some allusion to the first Earl Charlemont. He built in 1774 Charlemont House, facing Rutland Square. Sir William Chambers was his architect. It is now a Government office. Charlemont was the friend of Hogarth, Burke, Reynolds, and Goldsmith; his house became the centre of politics, society, art, and letters.

Belvedere College.

The chief interest in the plaster in Belvedere College is that it most markedly belongs to a transition period. The design still follows the old Italian feeling, the panel decoration, etc., being "built up," as opposed to the "radial" designing of Adam's style. The work has, however, become quite light, and is in low relief, and the scroll-work is simple and inclined to be wiry.

Ely House.

In order to refute Arthur Young's statement as to the inadequacy of Dublin houses for purposes of entertainment we can hardly select a better example than that of Ely House, Ely Place, originally one splendid mansion. It was afterwards divided into two houses, known as Nos. 7 and 8. No. 8 was for many years the residence of Sir Thornley Stoker, M.D., a man of extreme culture and a lifelong collector of old furniture, silver, etc. The sale of his collection attracted connoisseurs from the British Isles and abroad. Fortunately the photographs for illustration in the sec volume of the Georgian Society's publication taken during Sir Thornley's lifetime, and thus various rooms are shown containing splendid appropriate furniture.

Ely House was erected in the then new street Place). The site was purchased by Lord Loft created Earl of Ely in 1771—and he lived in the h till his death twelve years afterwards.

In the internal decoration, which is very fine, we a mingling of the style prevalent in the houses ere earlier with that of those beginning to supersed The stucco ceilings, the carved wood doorways, their pendant "sways" in the drawing-room, con with the later Adam style of ornamentation, appears on the dining-room walls.

The splendid staircase is perhaps the most str feature of the house. It is in three flights, and is a large Venetian window. The steps are stone the balustrade is decorated with figures of an emblematic of the labours of Hercules; a life-size f of the hero himself stands at the foot of the stair. animals in the balustrade are carved in wood and under the handrail are a row of medallions designed and executed in lead. Balusters are wr iron, with ornaments in lead.

Miscellaneous Work.

I do not think that eighteenth-century work rally developed any special architectural featu Ireland, with the possible exception of deco plaster. There has always been a theory tha early plaster work was Italian, but the researches Georgian Society have quite disproved this. We f nearly every case where the plasterer has been t that he was an Irishman. I think this is to be exp as, after all, some of the finest craftsmanship world is to be found among the early Christians' carving, goldsmiths', and scribes' work of pre-A Norman Ireland, and the tradition had not entirely lost.

Possibly a note as to the cost of work durin period we are dealing with may be of interest. have complete records of one large house whe bricks were Dutch, and the joinery all Irish oa one of the items in the account is "To forty labourers for one week one pound," 5d. per we less than one penny a day! It is little wonde people could build great mansions.

The general development of design througho eighteenth century was much as in England. gave place to mahogany, panelling and joinery rally was always importantly treated in the big Later, plaster was more used for mural decoratio at first was practically an imitation of wood pa eventually becoming more and more free, until it nated in the Adam period.

I should like, in conclusion, to say a word as last.

The Brothers Adam clearly started design meet the needs of the smaller houses rapidly sp up through the prosperity of the merchant class taste for this work became so strong that, in Du any rate, one sees houses which were only quarter to half a century old, stripped of their decoration and redecorated in the Adam manne was no doubt justifiable in small houses, but was done in some of the immense rooms in have seen it, notably the reading-room in L House, the result is absolute failure. The deta of scale with the room, and the general effect is fussy mosaic. This effect is emphasised whe than two colours and a ground are used.

Fashion, indeed, must have been wonderfully —hundreds of gabled houses, built between 1 1730, had their gables levelled and plain p added, in the second half of the century.

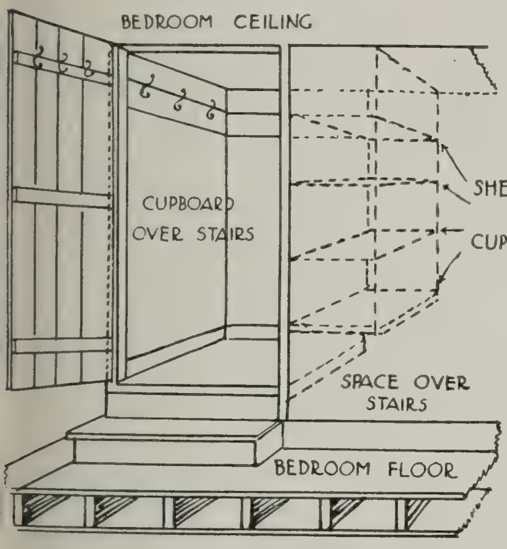
CORRESPONDENCE.

ditors disclaim all responsibility for the statements made or opinions ud by correspondents, who are asked to be brief, and to write on one side only of the paper.

Minor Matters in Planning.

he Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

RS,—Your paragraph, "Some Minor Matters in ning," has induced me to write this. I am not an itect or builder, but am interested enough in both ıke in your publication, and as an owner of some .l property minor problems have come my way. lack of a really good cupboard and the great waste ɔace over the stairs is one of the problems I have ɜd to my own satisfaction—and that of some of my nts. And it is because, after the careful study of y plans, I do not find anything similar to my ıod that I feel it right to ask you to make it known the common use and convenience of all. The ıes I provided with this type of cupboard had been about seventy years. The stairs rose from the g room, starting with windows, and the head room up to the top ceiling. I had a cupboard door e from the bedroom 18 in. above the floor—one -step in the room and one on to the floor of the board, which was the square of the stair width, ut 2 ft. 10 in. Then 18 in. up from the floor of the board I had the first shelf 16 in. to 18 in. wide ɜnding over the stairway beyond the floor of the board, and above this there was room for three or shelves of the same width. These shelves are ellent for linen and spare blankets, and the two ls of the cupboard are free for hanging, and the k of the door also. My tenants, who were mostly ones before I bought the property, are naturally ısed with this accommodation, for the houses had ıing of the kind before. This method makes two e cupboards possible, whereas in many cottages square portion over the stair foot below is already l as a cupboard in one bedroom by forming for the t room another, gaining access to it by the two steps



CUPBOARD ARRANGED OVER STAIRCASE.

ı short time after I had made this alteration I found ıpboard almost identical in a very old cottage, so I not claim any new discovery. I enclose a sketch how more clearly what I have described.

GEORGE S. TANNER.

'.S.—Hat-box shelves are get-at-able on the stairs ', fixed on the back of the cupboard.

Model Answers to Examination Questions.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—In the JOURNAL No. 949 of March 19, 1913, a series of Model Answers to the R.I.B.A. Examination Questions was commenced, and this was maintained until those papers were all ideally answered. This system has, unfortunately, not been made a precedent.

I think the legal papers are in advance of the architectural journals in this matter. Invariably after the Inter. and Final Law Examinations the Questions —and often times the Model Answers—appear the following week in all the legal papers. What a boon to the legal student this must be!

Undoubtedly it would be a great blessing to the large numbers of young men who are at present articled to architects if the questions set at the R.I.B.A. (and perhaps the M.S.A.) examinations were regularly printed in your journal.

I hope that a start in this direction will shortly be made by publishing the questions set last November.

ARTICLES.

[We should be glad to have the opinions of other readers as to whether or not we should be justified in giving up valuable space to this subject.—EDS. A. AND B.J.]

A World Centre of Communication.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—Your contributor in the current issue of the ARCHITECTS' AND BUILDERS' JOURNAL says: "Ignoring for the moment the insuperable difficulty of language, which would make the international metropolis like a veritable Tower of Babel, etc." With regard to this suggestion I must join issue with him. The success of the wonderful international auxiliary language, Esperanto, has demonstrated that it is possible to enjoy the manifold advantages of mutual intercourse among all the nations. International congresses are notoriously unsatisfactory, owing to the great difficulty experienced by delegates in understanding one another, but this is not so at the Esperanto congresses, where members, whether from Finland, France, Portugal, or Great Britain, can all unite and interchange experience by the aid of a common language. In the recent competition for the Australian capital one of the premiated competitors, in Finland, was attracted to compete by reading an announcement of the competition in Esperanto. It is a wonderful monument to the patient and scholarly work of the Polish Dr. Zamenhof, and is founded upon the already familiar international roots, Latin, German, and so forth, being far easier to learn than any of the national languages, because it is perfectly regular in structure, and has rejected the local peculiarities and included the strong points of each. "The creation of a world centre of communication" would be in Esperanto, "La kreado de monda centro de komuniko," a phrase which a Frenchman or an Englishman could almost guess the meaning of at sight.

Now that there is such a tendency in the different countries to work on parallel lines in the development of the Neo-Classic style, would it not be a good thing for architects to take up Esperanto as a means of comparing notes and for mutual help in developing the broader themes of design? Not until this is done will it be possible to have real International Architectural Congresses. It is possible to learn Esperanto entirely without a teacher, as the pronunciation can be acquired by anyone in a few days *studying alone*.

FREDERICK THORP.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Mr. Blomfield's Address to Students.

In the course of his interesting address to students, delivered at the Institute on February 9 last, Mr. Blomfield referred to the recent controversy in the "Morning Post," which he did not think had made any difference to the position of the modern architect. He declared that the foundations on which our methods are based were not so shaky, so purely arbitrary, as the critic would have his readers believe.

"Apart from external tradition, apart from the legacy of the architecture of the past in actual buildings, in every artist there has to be taken into account his own individuality, his temperament, his habit of mind, a certain quality which appears in every expression of his life. That temperamental basis is itself partly the result of heredity. A famous French surgeon and man of science, who died last year, pointed out, amongst the last of his utterances, that our thought and our discoveries are often only 'the *résumé* of observations of the past, not only of the past from which we directly derive our instruction, but of a past of which we have no conscious knowledge.' Are we to turn our back on this? Are we to repudiate all that makes us what we are—that which we have in ourselves, and that which we have acquired by education: *naturam furca expellas, tamen usque recurret.* Those who have studied the development of modern architecture in this country with intelligence and sympathy are aware of a certain definite drift of opinion among varying minds. Men have come together to the same standpoint without conscious thought of doing so. Recollect how Norman Shaw came right out of Gothic to the Neo-Classic of his later days. Shaw possessed one of the keenest and most vital intellects that I have ever come across. He was not the man to change his methods on a mere caprice, but he did change them in obedience to his own instincts and to a feeling that was in the air, and that is daily gathering force and giving stability to the architecture of this country."

Mr. Blomfield went on to speak of his own evolution—from Neo-Gothic to Classic, and express his belief that it coincided with that of many of his colleagues. "Not consciously and deliberately, but by the steady logic of facts acting on their individual temperaments, they have arrived each at their own idiom, which they neither would nor could change any more than the language that they use. The results are imperfect, but one step I believe we have made to the attainment of genuine architecture, and that is: we have learnt to think in terms of architecture—we no longer take up a style like a new coat" . . . "and as to styles, don't worry about them. Each man who has anything to say must have a style—that is, a peculiar manner of his own. All I ask you to do is to study deeply and widely before you pronounce definitely and dogmatically for any one method rather than another."

Mr. Cave's Criticism of Designs and Drawings.

At the outset of his address, Mr. Cave referred to the thanklessness of the critic's task. Not only, said he, was it a somewhat thankless task for anyone to undertake, but in his own particular case he could not help feeling that one who had never competed for any of these prizes could perhaps hardly realise all the difficulties of attempting to set out on paper an imaginary design called up by the few lines of printed matter somewhat vaguely set out in the programme. He was well aware that this vagueness was intentional, and to some it was a spur to the imagination. All honour to those whose imagination could escape from the ordinary conditions of building in these days. It is a splendid exercise, and if in the future they found that local conditions and money restrained their high flights surely they would have benefited by these student exercises.

He could not help mentioning two tendencies which appear to be gaining ground amongst the students of to-day.

First, there appeared to be a general falling off in the study of old work, and a neglect of the traditional forms of design. Originality, which meant ignorance of what had been done before, was rarely successful. Originality to be successful could only be achieved by a careful study of the past, and for a student it was the only right method to adopt. Measure and draw the fine work of our ancestors, and so the tradition would be carried on and upwards and their buildings would rest on sure foundations. Secondly, do not be carried away by mere draughtsmanship, which is not design. It is no doubt very fascinating, but look at the walls of the Architectural Room at the Royal Academy and you will see that they have lately become a mere water-colour show and that the more solid architectural design is being neglected.

After expressing regret at the falling off in the number of competitors, Mr. Cave went on to discuss the designs.

The Soane Medallion.

We will begin with the Soane Medallion: "An Official Country Residence for a Royal Personage in the United Kingdom." In this competition we have several designs of great merit and exceptional interest.

Beginning with that over the badge of the Thistle, we have a fine Royal residence on a fine site, evidently in the highlands of Scotland. The approach across the river with its well-arranged roadway ascending the hill gives a noble entrance to a noble residence. The plan of the house situated on this great spur of rock, built round two courtyards, with the stables to the north and the gardens to the south, is truly royal in character, and is shown by a set of really beautiful drawings. It would take too long to go over all the fine details of this design, but from the sections it appears that all the principal rooms have been carefully thought out, from its great ballroom, with its deeply coffered ceiling and ingenious gallery, to the soberly designed chapel and its simple but effective organ. I should advise all students to study the sections in this building, which are drawn in a masterly manner, and, although showing the utmost detail, are in no way confused.

Coming next to the design by "Farnesina," we have a very different setting for our palatial residence, and it appears to me to be set under Italian skies rather than in the cold grey atmosphere of the British Isles. The plan of the house does not appear to me to be so satisfactory in its arrangements as that of the last mentioned. Take, for instance, the library, which has no wall-space for books, which would have to be accommodated in the centre of the room in bookcases which would sadly obstruct the light. On the entrance elevation the central portion of the building seems to have little rela to the façade overlooking the lake. doubt this is partly due to the differ in level between the forecourt and the race on the other side, but the contra think, is too great to be satisfactory. windows also appear too small, tho we can all appreciate the value of wall surfaces; and it is doubtful if the square blocks containing the palm kitchen courts would be really pleasan execution. [These two designs, pl respectively first and second, were re duced in THE ARCHITECTS' BUILDERS' JOURNAL of February 4.]

Mr. Cave dealt next with the o Soane drawings, and with those for Tite prize, including that by Mr. Tren Wills (reproduced in our issue of ruary 4), the Grissell Medal, the P Studentship, etc.

Speaking generally (he concluded the whole of the drawings submitted year, it might be said that, although f in number, they were fairly up to the a age, and he should like to congrat those who had received prizes and hon able mention, and to those who had been successful, better luck next time

Presentation of Prizes.

Mr. Blomfield, before presenting prizes, said that although, of course, t congratulations were due to the win some credit should be accorded to schools at which they were trained. had therefore decided to give with names of the successful students schools to which they belonged. T were as follows: Soane Medallion, Cyr Farey (Royal Academy Schools), H. Bradshaw (Liverpool University). Prize: Trenwith Wills (Royal Acad Schools), A. G. Shoosmith (Royal demy Schools). Ashpitel Prize: W. Friskin (Glasgow School of Art). P Studentship, 1913: W. Paterson (E burgh College of Art). Grissell Pr P. D. Bennett (Birmingham Munic School of Art).

Discussion.

Sir Thomas Brock, R.A., proposin vote of thanks to Mr. Blomfield and Cave, referred to the criticism that wa variably levelled against modern arch ture. A great deal of the sculptor's was of a public character, and each p came in for as much criticism as on Mr. Lloyd George's Budgets. They co however, take some consolation from reflection that no two critics thought a and therefore they should not attach much importance to any one of them. thought that if a man was to excel in his severest critic should be himself. advice of a veteran, however,—and ev one was a veteran who had passed the of fifty—should always be caref weighed by younger men. No student thought, would leave that hall wit feeling indebted to Mr. Blomfield and Cave for the help, advice, and encour ment that had been given.

Mr. Solomon J. Solomon, R.A., ha seconded the vote of thanks, Mr. Bl field, in reply, said the Institute alw welcomed members of the Academy such occasions as the present, for they that they came down in full sympathy what the Institute was doing to impr the architecture of the country. Man, continued, first built his hut, then trie carve it, and afterwards painted it gamboge; but this alliance of the arts in the course of modern history, got a l out of joint. The public had lost all se of the decorative art of the painter.

LOSIVES AND THEIR USE IN EXCAVATION WORK FOR BUILDINGS.

the difficulties encountered in building and construction work, perhaps ost difficult and at the same time inderstood operation is the removal from a building site. Such work n let to some sub-contractor or is d in the best way known to the con, which in many cases turns out to ery expensive operation. The blastrock is a science which can be only by experience; but even exe does not teach everything about bject, and most contractors must knowledge of this subject without work done by the best powder men. llowing article considers some of the al points relative to work of this

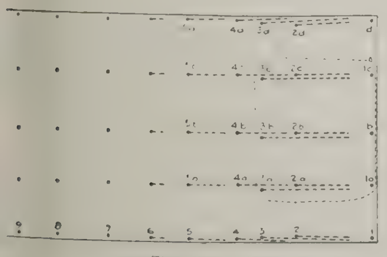
se of Explosives in Basement Excavation.

plan and section in Fig. 1 show a nethod of drilling the holes for reg rock from a basement excavation. . 1 (a) the holes are shown by heavy lines and the depth and limit of cavation are shown by the light lines.

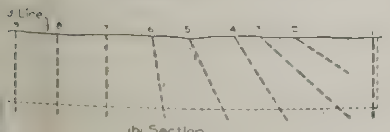
lasting soft rock or shale it is custo use powder in preference to high ives, since it is slower in its action. amite is used in soft rock it usually out a small crater-shaped hole, for ason that the action is too rapid to unicate itself to the surrounding On the other hand, if powder is he action is slower; the force exerted e communicated to the surrounding and more rock will be loosened. If ck is hard it is better to use dynaas it is necessary to shatter it with len shock.

der can be used to advantage in ing stone which is to be used in ry work. In this case a line of s is driven, together with a few bore at regular intervals, along the line it is desired to split the rock. After edges have been driven in solid, a ght blasts with black powder will he rock along the desired line.

seen from Fig. 1 that holes Nos. 1, d 3 form a triangular or wedge section. If these three holes are at the same time they will start the ation by blowing out this wedge piece. It would be better in startst to blow holes Nos. 1a, 2a, and 3a, an electric blasting machine is used ree centre groups could be "pulled" same shot. This would loosen the ial shown inside the curved dotted n the plan. After the loosened rock een removed the rock at the sides be blasted from the two groups of holes Nos. 1, 2, and 3, and Nos. 1d, 2d, and 3d, which now could be fired without danger of breaking back outside of the excavation line. The remaining holes could then be fired in groups, the number fired at each shot depending upon the method of firing and upon other conditions. It is best in each case to pull the centre holes first, leaving sufficient space to shoot the side holes. The spacing of holes is largely a matter of judgment; in general, the distance from the hole to the face of the rock which is to be blasted should be about three-quarters of the depth of the hole. In deeper holes the "burden" would be less in proportion to the depth of the hole. Fig. 2 shows the manner in which the rock breaks under a high explosive, and indicates the proper depth of hole. The distance, too, which represents the burden, is three-quarters of the distance from the centre of the charge to the top of the hole. The hole shown in Fig. 2 represents a "sprung" hole or enlarged portion of the hole. If the face, *cd*, of the rock is free, as indicated by the drawing, the shot will break out a crater-shaped section, indicated by the lines *ad* and *ef*, carrying with it the shoulder above. If, however, the hole is merely drilled to the floor of the excavation, represented by *ab*, the force of the blast will be reflected upward from the floor and will break out a section included between the lines *eg* and *ak*, which will also carry with it the shoulder above. This explains why the rock will fly more if the hole is loaded too high. If the hole is not sprung and is loaded up to the point *h*, the rock will break as indicated by the line *hi*. It is evident that the distance from *h* to the top of the hole does not leave enough rock on top of the blast to resist both the direct force of the blast and the force reflected from the floor. Thus the portion *hij* is broken by the direct strength of the blast and is then met by the upward rebound, and the broken pieces are thrown into the air. Figure 3 indicates the action when the hole is drilled too deep, and explains why in some cases it is so often necessary to "mudcap" or "dobe" large pieces on some work. If the hole is drilled too deep the charge blows out a crater-shaped section of rock at the bottom of the hole, and the shoulder above this crater is broken off or is left hanging without being shattered. It is then necessary to mudcap the big pieces in order to make them small enough to handle. By mudcapping is meant the placing of several sticks of dynamite on top of the boulder which is to be broken, covering them with mud or clay and firing them. In the west this is called a "dobe" shot. A shot of this kind is occasionally necessary, but if it occurs too often the depth of the hole should be changed in proportion to the size of the burden.



(a) Plan



(b) Section

Fig. 1.

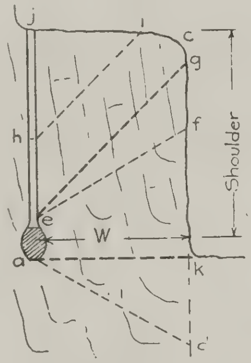


Fig. 2.

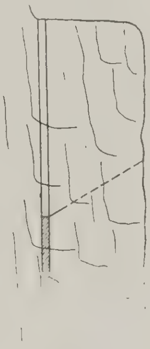


Fig. 3

Method of Placing and Firing the Charge.

In blasting, one of the axioms of the powder man is, "Don't let the powder come up in the hole." The place for the charge is in the bottom of the drill hole. There are several reasons why this condition should be met. One of them—and one which concerns the man who is blasting near other buildings—is that if the charge extends too high in the hole it is likely to cause small pieces of rock to be blown a long distance. The best way to keep the charge down is to "spring" the hole. This consists in enlarging the bottom by exploding a small quantity of dynamite in the hole, with little or no tamping. This enlarges the bottom of the hole, and the operation may be repeated until there is room for the charge. When the shot is fired the rock is simply lifted and drops back into the hole, very little or none of it being scattered. Care should be taken not to spring the hole too much, as the effect may be lost. After once springing a hole, it must be allowed to cool thoroughly before any powder or dynamite is put into it. Loading must be done with a wooden tamper. The material used for tamping should be free from small pieces of stone or other hard material which might produce sparks or damage to the fuse. Moist clay is the best material for tamping, a paper wad being placed between it and the powder. The tamping should be firmly rammed into place. In loading with powder, first spring the hole and then pour in the powder until it begins to rise in the hole, placing the primer as nearly as possible in the middle of the charge.

The best method of ignition is by means of an electric fuse. The primer for a powder charge should be made into a cartridge with the cap or fuse in the centre of it. When powder, cap, and fuse are used it is necessary to place the primer or cartridge containing the cap at the top of the charge, otherwise the fuse will burn the powder before the spark reaches the cap. The end of the fuse is first placed in the end of the cap (with the fuse not quite touching the composition), and the cap is then crimped tightly to the fuse with a cap crimper. The cap should then be placed in the end of the cartridge as shown in Fig. 4. Fig. 5 shows the proper method of inserting an electric fuse in a powder cartridge.

The approved method of priming a dynamite cartridge is as follows: With a pointed stick about the size of a lead pencil make a hole in one end of the cartridge, then insert the electric fuse, bending the two wires carefully over the end of the cartridge and lying them thereby with a string, as shown in Fig. 5. In tamping press the material down gently for the first 8 in.—after that more force may be used.

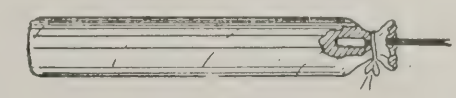


Fig. 4.

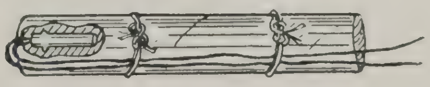


Fig. 5.

In blasting with dynamite it is necessary to use a double-strength cap or fuse.

The following general directions are given by the Du Pont Powder Company (U.S.A.) for blasting by electricity:

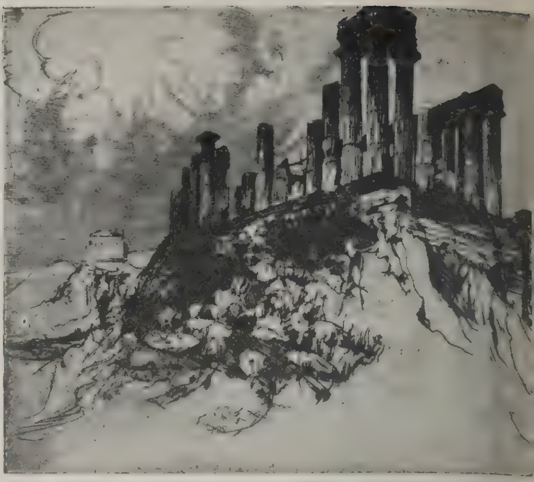
Drill the number of holes desired to be fired at one time, the depth and spacing of the holes depending upon the character of the rock, size of drill holes, etc., the blaster, of course, using his judgment in this matter. Load the holes in the usual manner. Avoid taking hitches in the electric fuse wires, as by this very common practice the insulation of the wires may be injured, and the current of electricity may pass from one wire to the other without passing through the cap, hazarding a miss-fire. The electric fuse is best placed when in the centre of the charge. In tamping the hole, great care must be taken not to cut the wires nor to injure the cotton covering the fuse wires and not to pull the electric fuse out of place. Allow at least 8 in. of fuse wire to project above the hole to make connections. When all the holes to be fired at one time are tamped (and one fuse only is used in a hole) separate the end of the two wires in each hole, and by the use of connecting wire, join one wire of the first hole with one of the second, the other or free wire of the second with one of the third, and so on, leaving a free wire at each end hole. When two electric fuses are used in each hole, connect one wire of each of these two fuses together and then connect the holes by the remaining wires of the fuses, as would be done when connecting only one fuse in each hole. In other words, connect the fuses in series throughout. All connections should be made by twisting together the bare and clean ends; it is best to have the joined parts bright. Scrape off the cotton covering at ends of wires to be connected, say for 2 in., then scrape the wire until it is bright. This makes a clean, fresh connection. Bare joints in wire should never be allowed to touch the ground, particularly if the ground is wet. This can be prevented by placing dry stones under the joints. Insulating tape is also furnished for waterproofing bare joints. The charges having all been connected as directed above, the free wire of the first hole should be connected with one of the leading wires and the free wire of the last hole to the other of the two leading wires. All being ready, and not until the men are at a safe distance from the blast, connect the leading wires, one to each of the projecting screws on the front, side, or top of the blasting machine, through each of which a hole is bored for the purpose, and bring the nuts down firmly on the wires. Now, to fire, take hold of the handle for the purpose, lift the rack bar (a square bar, toothed on one side) to its full length, and press it down quickly with all the force possible, bringing the rack bar to the bottom of the box with a solid thud. Do not churn the rack bar up and down. It is unnecessary and is harmful to the machine.

We have recently had under close and constant observation some blasting operations which were found necessary in clearing an old site for a new building in the heart of London, and have been much impressed with the utility and efficiency of the operation where old concrete foundations have to be broken up. In such instances, which must become increasingly numerous with the ever-growing employment of reinforced concrete, blasting is really the only practical resource.

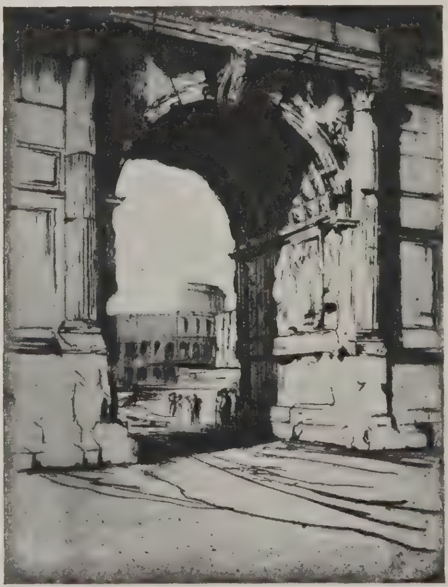
We are indebted for the above to a long article on the subject in the "Contract Record."

MR. ORPHOOT'S ETCHINGS.

At the Bedford Street gallery of Messrs. Goupil and Co., Mr. Burnett N. H. Orphoot, a Scottish architect, is showing a number of etchings of architectural and landscape subjects. Mr. Orphoot appears to work with both copper and zinc, and while his mastery in either medium is not always quite perfectly obvious, his successes more than atone for his failures. His talent is shown at its best in the two studies we reproduce. As an etching, "The Arch of Titus" is perhaps the finer in craftsmanship, revealing a delicacy and sensitiveness in the treatment of the masonry, and a control of light and shade that is not always apparent in his work—witness his "Temple of Juno, Girgenti," a finely conceived etching marred pictorially by the opaque blackness of the shadowed hill-side. No such mistake has been made in the Arch of Titus, where the sculptures and mouldings of the Arch have been handled with a just appreciation of essentials, and the very spirit of the structure seized in his firm handling of vertical and horizonal lines; nor yet in the more pictorial—and more ambitious—"Doric Temple." The latter is amazingly powerful, considering its small scale. It owes its emotional impressiveness largely to the fact that one looks at the Temple itself from the very base of the rough-hewn pinnacle on which it is set, and at an angle that enhances the towering effect of the columns; the dramatic note of the etching is also assisted by the stormy sky. But these aspects it is, after all, the artist's business to seize, if by so doing he can emphasise the emotional truth of a subject without the sacrifice of its æsthetic values. It is so much the better if, as here, recognition of æsthetic fitness, or of constructional power, in a picture follows, instead of precedes, its emotional appeal.



DORIC TEMPLE, GIRGENTI.



ARCH OF TITUS.

The ruins of "The Forum, Rome," and of "Arles" are other architectural subjects that have attracted the artist's ne
and have resulted in dignified w
There is courage, too, in the inci
modelling of the statuary group—
Cupids—by the lake-side at Versail
and one may cite one of the landsca
"The Approach to Girgenti," as a sir
but suggestive example of the art
talent in this field.

BOOK NOTICES.

English Church Architecture.

Mr. Francis Bond has produced anc
treatise on English Church Architec
and it differs from his previous one
that it is addressed not so much to the
fessional student as to "the great boo
readers who nowadays are intereste
mediæval architecture and wish to ol
some general knowledge of it." Most
fessional students, however, will also
much to learn from Mr. Bond's latest
tribution to the history of Gothic art.
true that what they learn from him wil
be of much assistance to them in the
filment of their immediate duties, fo
conditions of the modern world have
posed upon nearly all practitioners
necessity of adopting other method
architectural expression than those w
are so fully illustrated in these sumpt
volumes; yet by acquiring an inti
knowledge of the achievements of
mediæval forefathers it is possible to
a new insight into those general princ
of design which are common to all w
of art in whatever "style" they ma
fashioned.

It is by this test that every treatis
architecture must be judged—we
decide whether it gives us a new in
into the principles of design. If it
not, its value is historical and arc
logical merely: that is, it represents
a collection of useful facts whose tru
nificance is not apparent until they
been interpreted by the philosopher.
Bond tells us that archæological h
has as far as possible been achieve
these volumes; and yet he has cho
subject so limited in character tha
treatment could not very well be any
but archæological, for he has taken a
scribed group of architectural pheno
which belong to a certain brief peri
history, and he has discussed them wi
reference to other periods and other a
tectural phenomena.

Mr. Bond begins with a differenti

e parish church from cathedrals,
hes of monks and canons, and col-
e churches. The characteristics of
onastic Orders, the Canons Regular
anons Secular the Friars and the
ry Orders are set forth. In his own
"It is good for those who are to be
luced to mediæval church architec-
know not only how a church was
but why it was built, who built it,
erved in it, who worshipped in it, and
manner of worship was theirs—
nt or Modern." Next, the whole
ct of ecclesiastical planning is
d. A large number of plans have
inserted and on each of them the
divisions are clearly marked. We
have a chapter on the growth of the
sh parish church, "of which a con-
ve account appears for the first
" It gives some idea of the industry
which Mr. Bond has studied his sub-
hen he tells us in his preface that he
not less than two thousand visits to
e and town churches. The difficult
ct of vaulting has been treated at
h. It may be remarked that special
ion has been given to lierne vaulting,
hich particularly beautiful illustra-
have been provided. Now that photo-
y has been brought to such a state of
ction, it is for the first time possible
roduce adequate pictures of our
eval vaults. Of course, the draughts-
could sometimes do justice to the in-
of a church, and could depict the
ary perspective view of it; but for
urpose of the student of construction
far greater help to have a represen-
of the roof as it appears when viewed
directly underneath, and this is just
the draughtsman cannot give us
ut considerable labour and discom-
The photographs of the vaults at
ln's Central Tower, Tewkesbury
ytery, Oxford Cathedral, St. George's,
lsor, and at the Gloucester Lady
el may be singled out for special
e. At the close of this chapter we
a dissection of fifty-seven individual
s, and their structure is made clear to
the aid of diagrams. This account
e English vault may justly claim to
e most complete one that has yet ap-
d. The complicated abutment
m is very clearly explained, and the
sis here given should be of especial
ance to the student readers of this
al who may aspire to become candi-
for the Intermediate Examination of
oyal Institution of British Architects!
e chapter on capitals has been sup-
with a host of illustrations, and the
tion of the various types, foliated,
ralistic, and moulded, is traced. One
e most valuable parts of this treatise
at which deals with the subject of
tration. Our author says, "Never
e has there been so comprehensive
xposition of the wealth and diversity
nglish window tracery; even to those
have a considerable knowledge of
ish Gothic it will come as a surprise
a revelation." Twenty-four pages are
ted to the discussion of the purpose
e Low Side Windows which present
a baffling problem to the archæolo-
No fewer than fourteen hypotheses
rought forward. To most people,
ver, it is a matter of very small im-
nce whether these windows were in-
d to act as ventilators, or whether
had some ceremonial object. But
who are interested in this aspect of
itecture will find that the particular
lem of the low side window has been
ght considerably nearer solution. The study of roof construction has been made easy and attractive by the singularly fine illustrations of hammer beam, tie-beam, and cradle roofs which are to be found in the second volume. The final chapter deals with towers and spires, features which Mr. Bond describes as "the one extravagance of Gothic architecture."

The present treatise is intended to appeal to a wider public than did the author's former book, "Gothic Architecture in England," which he describes as a more comprehensive, detailed, and advanced treatment of the subject. But the second work must not be regarded merely as a popular substitute for the first, for it contains a considerable amount of new matter. The two are mutually complementary.

An Introduction to English Church Architecture, from the Eleventh to the Sixteenth Century. By Francis Bond, M.A., F.G.S., Hon. A.R.I.B.A. Humphrey Milford, Oxford University Press. £2 2s. net.

Natural Rock Asphalts and Bitumens.

That "the world is so full of wonderful things, I am sure we should all be as happy as kings," as R. L. Stevenson expressed it, is a very comfortable doctrine, investing with an interest that "makes drudgery divine" most of the substances and operations which in this workaday world would otherwise reduce us to the last extremity of boredom. How interesting a history may attach to what, on the face of it, may appear to be a most unpromising subject is exemplified in a book which Mr. Arthur Danby has produced on "Natural Rock Asphalts and Bitumens," a subject on which one might ignorantly have supposed it difficult to write anything more than a leaflet, but which has supplied its author with enough materials for a stout volume.

In the first place, the author finds it necessary to define bitumens, pitches, and asphalts, a matter on which all the dictionaries and encyclopædias seem to be seriously at fault, to the confusion of such as trust to their supposed authority. Mr. Danby defines bitumens as "all such substances which are found in nature and require no further treatment other than the extraction of the mineral and vegetable impurities that they may have mixed among them . . . also such substances which are derived from the distillation of any of the above or of the asphaltic petroleums"; pitches, as "all such substances which are derived from the destructive or fractional distillation of all other natural organic bodies or from the distillation of vegetable oils"; asphalts, as "all such substances that are impregnated—as distinct from being merely mixed—with either bitumen, pitch, or a mixture of the two." In each instance the author discusses and to some extent qualifies or refines upon his definition, and he deals, indeed, in his introductory chapter, very luminously with the common misuse of terms that besets the subject.

Treating, in Chapter I., of the geology of bitumen and rock asphalt, the author shows that the material possesses, for the geologist, a good deal of the interest that is inseparable from an intricate problem; bitumen ranging in form from a very thin liquid—Persian naphtha—to an extremely brittle and hard solid—gilsonite, glance pitch, etc. — and being distributed throughout the entire range of geological strata, from the Laurentian rocks to the most recent members of the quaternary period. Moreover, there are several theories as to its origin. Professor Clifford Richardson and many others believe that bitumen is more or less intimately related to petroleum and the mineral oils, if it is not actually an offshoot from them. Malo and Delano, on the other hand, think that bitumen is "only similar to itself." Another authority believes that while the gaseous and liquid forms were produced in the strata in which they are found, or were received into such strata shortly after formation, the semi-solid and solid varieties were produced by the oxidation and evaporation of liquid petroleum escaping from the underlying or better preserved strata into other strata or into fissures where the atmospheric action and loss of the more volatile constituents can take place. Others think that the stuff is formed by volcanic action. About rock asphalt there is rather less uncertainty. It is always found in association either with limestone or with sandstone, sometimes in such positions that it has to be mined, while in other instances it can be quarried; but its origin is still the subject of rival theories.

In a chapter on "history and ancient use," myth, legend, and actual record all tend to show that the use of bitumen is of unknown antiquity. A German writer would have us believe that a tunnel was constructed under the river Euphrates and built in with burnt brick, which was afterwards coated with bitumen, more than four thousand years ago. One of the earliest sources of supply was the Dead Sea, whence the Jews shipped it to Egypt for use in embalming. Probably the dreaded "Greek fire" had bitumen for one of its chief constituents. Bitumen has been used as a medicine and as a toilet preparation: and many interesting references to it in its diverse forms and uses are found in literature, from Herodotus to Robert Browning, who, in stanza 4 of his "Apparent Failure," speaks of—

> "Some arch, where twelve such slept
> abreast,
> Unless the plain asphalt seemed best."

Asphalt may be said to have been rediscovered about 1712, when a Greek doctor named Eyrinis, visiting the Val de Travers, met a German workman named Jost, who had noticed the peculiar properties of a rock in the cliffs round the lake. Jost seems to have been disappointed in his failure to make fuel of it, but the doctor recognised it as the bitumen of the ancients, and obtained from the King of Prussia a concession which, as our author says rather happily, "may be looked upon as the birth certificate of the modern employment of rock asphalt for building purposes." Eyrinis published a dissertation on it in 1721, and about 1735 he discovered and exploited the important mine at Lobsann. It is pitiful that, like so many other pioneers and discoverers, he died the poorer for his efforts.

Probably Count Sassenay, who in 1802 secured the concession of the Seyssel mine and thus really started the modern commercial development, made a large fortune out of it. France quickly adopted mastic for paving and waterproofing, and can even now "show more rock asphalt work than can any other country." Deposits at Limmer, in Hanover, were worked with success in 1843 by Hennig, and the general modern exploitation of the material is summarised in a special chapter, while another enumerates and describes the principal sources of supply, except those of America, which are dealt with in a separate chapter. Other chapters are taken up with extraction and preparation, tests and analyses, physical properties, the carrying out of rock asphalt mastic work, its application to macadam roads, and its miscellaneous uses. Altogether it is a valuable as well as a most interesting book on a subject which hitherto had lacked an exponent.

"Natural Rock Asphalts and Bitumens: Their Geology, History, Properties, and Industrial Application." By Arthur Danby, Chemist and Public Consultant on Rock Asphalt and Bitumen. London: Constable and Company, Ltd, 10, Orange Street, Leicester Square, W.C. Pages x. + 244, 7½ ins. by 5¾ ins., 8s. 6d. net.

Materials of Construction.

Mr. J. A. Van der Kloes, "professor in the science of materials of construction in the University at Delft," has described in considerable detail the practical application of natural laws and phenomena in the work of masons, bricklayers, and concrete, and Mr. A. B. Searle has translated and annotated his treatise, which will be found of considerable value and interest to the architect who likes to understand as thoroughly as may be the properties and peculiarities of the materials and processes which he employs. These natural laws and phenomena are quite well known to every architect whose education has taken the usual course, and their restatement in this volume may seem to him as tedious as a twice-told tale; but he will condone it on observing that the deductions are often carried much further than those that have become commonplace.

The results of considerable research are embodied in the volume, more particularly with respect to the behaviour of mortar. It is claimed that the author's conclusions on this subject correct many erroneous impressions; and if that is the fact, the greater accuracy of ascertainment should have the effect of modifying practice. Examples of work that has become defective through the use of improperly composed mortar are illustrated in the volume, and with regard to one group the following practical conclusions are reached: "In these structures every possible mistake appears to have been made: 1. Little or no sand was used to counteract the shrinkage of the mortar. 2. Far too much lime was used in proportion to the trass employed. 3. The blocks were sealed instead of being pointed. 4. The supporting wedges were not renewed from beneath the stone blocks." It is noted as a curious fact, for which no satisfactory explanation has yet been published, that when lime-cement mortar is used, efflorescence or wall-white sometimes appears only after the building has been completed for a considerable time, and consequently the architect or the builder may fail to associate it with the use of improperly composed mortar. For the avoidance of efflorescence, it is recommended that trass or some other hydraulic agent be added to prevent the washing out of the lime from cement mortar.

Many similar results of the author's investigations are recorded in the book, seven of the eight chapters in which relate respectively to the physics and chemistry of materials; to masonry; to bricks and stones; to the raw materials used in the preparation of mortar; to the composition, preparation, and use of mortars and of concrete; to tiling, roofing, plastering, and other work; while the eighth chapter is devoted to estimates and costs. Throughout addenda have been made by the translator, to whom also are presumably to be credited the supplementary illustrations of English brickmaking and mortar-mixing machinery. These are doubtless useful, although they rather tend to accentuate the somewhat diffuse character of the book.

"A Manual for Masons, Bricklayers, Concrete Workers, and Plasterers." By J. A. Van de Kloes. Revised and adapted to the requirements of British and American Readers by Alfred B. Searle. London: J. & A. Churchill, 7, Great Marlborough Street. Pages xii. + 236, 8¾ ins. by 5¾ ins., 8s. 6d. net.

"*Lockwood's Price Book.*"

It is duly noted, in the preface to this useful annual, that while during the past year the prices for labour and materials have gone up all round, nevertheless the cost of building is not materially greater, the reason for this exception being attributed "partly to improved methods of construction, but mainly to the keen competition which is everywhere prevalent." Besides the revised lists of prices, the volume contains the text of the various Building Acts, with annotations by Mr. A. J. David, K.C.; legal notes and memoranda incorporating recent cases, lists of district and borough surveyors, and an extensive collection of useful tables and memoranda.

"Lockwood's Builder's, Architect's, Contractor's, and Engineer's Price Book for 1914." Edited by Francis T. W. Miller, A.R.I.B.A. London: Crosby Lockwood and Sons, 7, Stationers' Hall Court, Ludgate Hill. Pages clxviii. + 268, 7¾ ins. by 5 ins.

Catalogue of Technical Books.

A new illustrated catalogue of scientific, technical, and industrial books has just been issued by Messrs. Crosby Lockwood and Son, of 7, Stationers' Hall Court, E.C.

"*One and All Gardening,*" 1914.

A new edition of the above year-book has just been issued at the remarkably cheap price of 2d. by the Agricultural and Horticultural Association, 92, Long Acre, W.C. The practical character of its contents should make it extremely useful to all who are interested in gardening.

"*The British Almanac and Cyclopædia,* 1914."

From Messrs. Robert Ingham Clark and Co., Ltd., varnish manufacturers, we have received a copy of the above—a most useful book of reference, whose contents are of so wide a range as to provide one with exact information on a thousand subjects, relating to official appointments, societies, theatres, hospitals, sports, etc.

Diaries for 1914.

We have received from Messrs. S. Davis and Co., 30 and 31, St. Swithin's Lane, E.C., a copy of a diary for the current year. Apart from the ordinary diary section it contains 260 quarto pages of valuable information pertaining to the electrical industry. The price is 3s. 6d.

Messrs. Hayward Brothers and Eckstein, Ltd., 187 to 201, Union Street, Borough, S.E., have also issued a diary for 1914, containing a good deal of information descriptive of the company's various manufactures, which include pavement lights, iron staircases, ventilators, drains, stable fittings, cooking apparatus, leaded lights, puttyless glazing, etc.

Waterproofing a Station Roof.

Ironite patent waterproofing process is being used for waterproofing the roof of the new station at Charing Cross now in course of construction for the Underground Railways.

SPECIAL LEGAL REPORT

Light and Air Dispute: Adjoining Buildi

Bailey and Sons, Ltd., v. Holborn
Frascati, Ltd.

February 6. Chancery Division. Before Mr. Ju
Sargant.

This was an action by Messrs. Ba
and Sons, Ltd., surgical instrum
vendors, of 38 and 40, Oxford Str
against Holborn Frascati, Ltd., the w
known restaurant proprietors of Oxf
Street, for an injunction and other r
in respect of an alleged interference
the light and air coming to the plaint
premises.

Mr. Grant, K.C., and Mr. Ribbon
peared for the plaintiffs and Mr. C
K.C., and Mr. Negus for the defendan

Mr. Grant said the plaintiffs asked
an injunction and damages in respec
the erection of the defendants' buildin
regard to the plaintiffs' rights to li
Defendants had put in a novel plea
defence, which raised a point of law.
yond a denial that the plaintiffs' li
had been materially interfered with,
defendants contended that an agreem
arrived at when alterations were m
years ago was a bar to the plaintiffs' cl
Defendants' premises adjoined plaint
and plaintiffs' case was that the de
dants had increased the height of t
building at the expense of plaintiffs' l
and that the interference was of a ser
nature.

His lordship enquired whether
plaintiffs' case was that both direct
lateral light had been interfered with.

Mr. Grant said that was his case.
defendants by greatly increasing
height of a wall, which was at right an
to the main portion of the building,
cut off so much light that that part of
plaintiffs' premises which was used
offices and for fitting purposes had
most materially affected. Plaintiffs
lessees, and their leases expired, as to
38 in 1920, and as to No. 40 in 1922.

Evidence was given as to the diminu
of the plaintiffs' light, the expert evid
being given by Mr. Howard Chat
Clarke.

For the defence evidence was give
prove that the alterations were carrie
in the usual way, and any haste was m
part of the scheme to get the work
pleted as quickly as possible, and ha
reference whatever to any action
plaintiffs contemplated. Mr. E. T.
Past Vice-President of the R.I.B.A.,
evidence for the defendants.

His lordship, in giving judgment,
he was of opinion that a great deal of
defendants' building operations m
have been restrained by, amongst
people, the plaintiffs, notwithstandin
arrangement that was come to bet
them and their freeholders when
previous alterations were made.
August, 1912, the defendants comm
the alterations complained of and an
storey was added to their Oxford S
premises, which raised the wall opp
the plaintiffs' premises some 14 or 1
above the height of the then existing
If an application had been made at
time an interim injunction might
been granted. The first defence was
by agreeing in August, 1911, to ce
alterations which the freeholder
acquiescing in, plaintiffs had aband
their easement of light. He did not a
with that view. With regard to
second part of the defence that there
no infringement of the plaintiffs'
ment, he came to the conclusion o

ice that it had been materially l, and as the plaintiffs had not alto- lost those rights they were entitled ne relief. He could not, however, hat there had been any rushing up building in order to defeat the iffs' rights, and he thought the run- up complained of was only part of lefendants' scheme. He was not, ore, prepared to grant a mandatory tion, but the plaintiffs were entitled mages. It was difficult to assess but considering them as a jury he ht plaintiffs were entitled to £20 a for the remaining 7½ years of their He therefore assessed the damages 50 and gave the plaintiffs the general of the action, less costs of the issue certain windows upon which iffs had failed.

COMPETITIONS.

mentary Schools, Greenwich and Battersea.

briefly announced in our last issue, ondon County Council have decided ite competitive designs for schools to ected at Billingsgate Street, Church , Greenwich, and Linda Street, York Battersea. Mr. John W. Simpson, B.A., of 3, Verulam Buildings, Inn, W.C., is the assessor.

following instructions apply to both s except in one or two particulars oned later: The character of the ecture and the materials used in the uction, except in so far as they may fined by instructions, are left to the ion of the competitors. They will n mind that economy is of great im- ice, though sound and substantial uction is imperative. The con- ion of walls, floors, and staircases is of fire-resisting material, and special ion must be given to walls and floors ating departments being made -proof. On the west and north-west competitors will reserve proper space guard the light to any windows they lesign with those aspects, having re- o existing or future buildings on the ing property. Except for single- latrines and play-sheds, no projec- will be allowed.

ndary walls not less than 7 ft. high be provided to all boundaries of the Each set of drawings must consist following and such other drawings y be required: 1. A block plan of hole site to a scale of 20 ft. to an ndicating—(*a*) The position of the buildings and of the proposed ex- ns thereto. (*b*) Schoolkeeper's (*c*) Outbuildings. (*d*) Play- ds. (*e*) Drains (collateral and main) heir fall and depth below ground. ntrances. (*g*) Boundary walls and treatment. (*h*) Roads. (*i*) The of the compass. (*k*) The levels of ound at the principal points.

A plan of each floor of the school ngs (including the roof playground) the schoolkeeper's house to a scale t. to an inch. The internal fittings rooms (fireplaces, groups of desks, rds, etc.) must be accurately 3. Sections and at least four ele- s to a scale of 8 ft. to an inch. The gs, the position of the window heads ation thereto, the mode of ventila- and the positions of boilers and ors must be shown.

4. An outline perspective view not to exceed 15 in. in either length or height.

5. A concise (typewritten) descriptive report of the design with a short specification of the principal materials it is proposed to employ. The method and arrangements proposed by artificial lighting (which is to be by gas) must be clearly described.

6. An approximate (typewritten) estimate which is to cover the whole cost of the buildings ready for occupation by the Council, exclusive only of (*a*) professional and clerk of the works' fees and salaries, and (*b*) such furniture and fittings as are not attached to and do not form part of the structure, *e.g.*, desks and tables. The school is to be planned for an organisation in two departments consisting of senior mixed (232 places), with provision for future enlargement by eighty places, and combined junior, mixed, and infants (260 places), with provision for future enlargement by eighty-eight places. The number of storeys and of the blocks of building is left to the discretion of competitors.

The Battersea school is to be planned for an organisation in three departments consisting of 392 boys, 392 girls, and 456 infants, and no future extension is to be allowed for. The date for sending in designs is not yet announced.

[An editorial note on this new departure of the L.C.C. appears on p. 113.]

Metropolitan Water Board Offices.

On the nomination of the President of the R.I.B.A., Mr. E. Guy Dawber, F.R.I.B.A., has been appointed assessor in the above limited competition. The cost of the building has been provisionally fixed at £80,000, but, on the advice of the assessor, it has been decided not to exclude designs which exceed that sum by not more than 10 per cent. The architects selected to compete are Messrs. Brown and Barrow, Mr. Edwin Cooper, Mr. H. O. Ellis, Mr. E. T. Hall, Mr. H. T. Hare, and Messrs. Warwick and Hall.

Workmen's Settlement, Belgium.

A competition has been promoted by the Belgian Government in connection with the planning of a workmen's settlement for the Campine coalfield. It is proposed to award premiums of £400 and £240. The programme of the competition, printed in French, may be seen at the Commercial Intelligence Branch of the Board of Trade, Basinghall Street, E.C. Designs are to be sent in by December 31, 1914.

Infirmary, etc., Watford.

The Guardians of the Watford Union require the services of an architect in connection with the building of a new infirmary and nursery at the workhouse, Watford. Architects practising within the area of the Watford Union are invited to apply for the appointment. Applications should be sent, by February 24, to Frederick Wilson, Clerk to the Guardians, Watford Place, Watford, Herts, from whom further particulars may be obtained.

Recreation Grounds, Seaford.

Seaford Rural District Council have decided to institute a competition for the laying-out of ten acres of land on the Salts as a recreation ground. The cost is not to exceed £3,000. Premiums of £75 and £25 will be awarded.

IN PARLIAMENT.

(*By Our Press Gallery Representative.*)

Government Contracts and the Lock-Out.

In the House of Commons Mr. Tyson Wilson, one of the Labour members, interrogated Mr. Wedgwood Benn, representing the First Commissioner of Works, regarding the effect of the lock-out in the London building trade in holding up contract work on Government buildings. He wished to know whether the Office of Works had been consulted in the matter and whether consent had been given to this delay.

Mr. Wedgwood Benn stated that work on lump-sum contracts between the Board and members of the London Master Builders' Association was suspended. Necessary work of maintenance in public buildings was being carried on.

Mr. Tyson Wilson asked whether, in view of the conditions which the employers were seeking to impose on their workmen, the First Commissioner would take the contracts out of their hands.

Mr. Wedgwood Benn said he did not think he could take any action with reference to the contracts.

In reply to Mr. Charles Duncan, Mr. Wedgwood Benn said he understood that three young men who were under the care of the Borstal Association, which befriended and supervised lads discharged on probation from the Borstal Institution, were employed by the contractors on the new Home Office. They did not report to the police, and had been employed there since October or November.

Mr. Duncan: Is the hon. member aware that there is a dispute pending in connection with this particular contract?

Mr. Wedgwood Benn: No. Beyond the fact that there is a dispute in the building trade, I do not know of any disagreement.

Mr. Duncan asked if it were a proper thing that those young men should be placed on a building of this description when there was a dispute between the workmen and their employers.

Mr. Wedgwood Benn said the hon. member was mistaken if he supposed that these young men were taking the place of men who were either locked-out or on strike. That was not the case at all.

Victoria and Albert Museum.

Mr. Grant asked the President of the Board of Education if the destruction of the majolica columns of the old Ceramic Gallery or Lecture Theatre Gallery in the Victoria and Albert Museum had been so complete that not a single specimen of them had been preserved.

Mr. J. A. Pease stated in reply that none of the columns in the old Ceramic Gallery had been preserved, but all the originals from which the columns in the gallery were adapted were in the Central Refreshment Room, and they were and would remain available for students and others desiring to study this class of work.

Mr. Grant asked if the President was aware that no specimens of middle Victorian pottery contemporary with the majolica columns in the old Ceramic Gallery of the museum had ever been exhibited in that gallery, and what steps it was proposed to take.

Mr. Pease said that between the years 1844 and 1869 more than 1,000 specimens of contemporaneous pottery, including 356 pieces bought at the Paris Exhibition in 1867, were purchased for the museum. In the fifteenth report of the Science and Art Department (1869) it was stated that a great improvement in the general classification of the collections was in course of being carried out by grouping the whole of the examples of ceramic art the property of the museum, and by arranging the collection in the new corridor of the Lecture Theatre. In the sixteenth report (1869) it was stated that the new Ceramic Gallery now open to the public had been filled with specimens of the potter's art of all countries and periods. In the eighteenth report (1871) it was stated that the ceramic collection which had been moved to allow of the painting and decoration of the walls of the gallery had been entirely re-arranged and all the new acquisitions exhibited in their respective divisions. The last part of the question did not arise.

Mr. Grant asked if the Committee who advised the President upon the new decoration of the old Ceramic Gallery were instructed to consider their recommendations, especially with reference to the exhibition of works of art of the times of Louis XIV. and Louis XV. contained in the Jones bequest; and if the right hon. gentleman was aware that such works formed only a portion of this collection, the whole of which must, under the terms of the bequest, be exhibited together and might not be separated.

Mr. Pease: The answer to the first part of the question is in the negative and to the second part in the affirmative.

PROJECTED NEW WORKS.

Church Hall, Bishop Auckland.

A church hall for St. Philip's, Auckland Park, is to be built at an estimated cost of £1,200.

Drill Hall, Jarrow.

Plans have been adopted for the erection of a new drill hall at the corner of Beech and Fir Streets, Jarrow.

School, Harrogate.

A new school is to be erected in the Skipton Road district, Harrogate, at a cost of over £8,600.

Housing, Walsall.

A scheme is to be forthwith prepared under the Housing Acts for the provision by the Council of 125 dwelling-houses.

Hotel, Liverpool.

It is stated that plans have been prepared by a London firm of architects for a large hotel to be erected in South Castle Street.

Fire Station, Bodmin.

The Bodmin Borough Surveyor has been asked to prepare detailed plans, specification, and estimate for a new fire station.

Bathing Pavilion, Margate.

The Corporation have decided to build, at a cost of £6,000, a pavilion on the Westbrook side of the town. The building will include tea-rooms and an assembly hall.

Warehouse, Glasgow.

A new warehouse is to be erected in West Nile Street, Glasgow, for Messrs. Menzies and Co., at a cost of £20,000. Messrs. Brand and Lithgow, of Glasgow, are the architects.

Municipal Offices Extension, Southport.

Southport Town Council have approved a scheme for extending and altering the municipal offices on the town-hall site in accordance with plans submitted by the borough surveyor, and application is to be made to the Local Government Board for sanction to borrow £7,500 for carrying out the works.

Baths, etc., Liverpool.

An inquiry has been held by the L.G.B. into the application of the City Council for sanction to borrow £70,000 for the erection of public baths and offices at the Pierhead.

Workhouse Alterations and Additions, Pontypridd.

The Pontypridd Guardians have provisionally accepted the tender of Messrs. E. Evans and Co., of Cardiff, amounting to £20,898, for alterations and additions to the workhouse buildings.

Infirmary Extension, Dundee.

Messrs. Johnstone and Baxter, architects, Dundee, are preparing plans for an extension to the Dalgleish Nurses' Home at the Dundee Royal Infirmary, to cost about £8,000.

Sailors' and Soldiers' Home, Edinburgh.

Warrant has been granted to the Trustees of the Sailors' and Soldiers' Home to reconstruct premises at East Register Street and St. James Square, Edinburgh. The architects are Messrs. J. N. Scott and A. Lorne Campbell.

Large Works, Newport.

Newport (Mon.) T.C. have approved a draft agreement with the British Mannesmann Steel Tube Co., who propose to erect at Newport new works (to employ 3,000 men) at a cost of over £750,000 for buildings and plant.

Sewerage, Aberystwyth.

A scheme has been prepared by Messrs. James Diggle and Son for the disposal of the sewerage of the borough, and application is to be made to the Local Government Board for sanction to a loan for this purpose. It is thought by a member of the Council that the cost would probably exceed £25,000, but, of course, this estimate is quite unofficial.

New Store, Nottingham.

The Caledonian Hotel, in Lister Gate, is to be demolished, the site having been let on lease to Messrs. Woolworth and Co., Ltd., the well-known storekeepers of New York and London, who propose to erect a new store to be run on American lines. The premises will extend right from Lister Gate to Castle Gate, a distance of about one-fifth of a mile.

Cold Stores, Swansea.

Swansea Harbour Trustees' Executive have decided upon the provision of a large cold stores for the port, which it is anticipated will become an important distributing centre for the South-West and the Midlands. The cost of the scheme is £50,000 and the accommodation to be provided is half a million cubic feet. All the necessary plans and specifications are completed.

Workmen's Dwellings, Chippenham.

Chippenham Rural Council are making application to the Local Government Board for power to borrow £2,460 for the erection of twelve workmen's dwellings, and at the inquiry to make representations for the granting of a loan of £1,000 to carry out the Blind Lane improvement, to which the central authority had withheld its sanction until the scheme for the erection of workmen's dwellings was adopted.

London.

Consent has been given by the L.C.C. to the erection of the following works:

City of London.—Buildings abutting upon St. James Court, Bury Street, City, on the application of Mr. T. H. Smith.

Hampstead.—Motor house at the rear of 113, King Henry's Road, Hampstea on the application of Mr. S. C. Lathbridg on behalf of Mr. W. Littlewood.

Kensington, North.—Addition to t premises of the Pall Mall Depository C Ltd., Barlby Road, Kensington, on t application of Mr. W. G. Hunt.

Marylebone, East.—Angle bay-windo columns, pilasters and a cornice at 68 a 69, Castle Street East, St. Marylebone, the application of Mr. J. Slater, on beh of Messrs. Misener.

Hotel building, over Baker Street Ra way Station, on the application of Mr. J. Wills, on behalf of the Metroplitan Ra way Company.

Wandsworth.—Addition at the rear 149, Balham Hill, Balham, on the applic tion of Mr. E. J. George, on behalf of M A. G. Jenkins.

Masonic Temple, Nottingham.

The Province of Nottinghamshire about to erect a new Masonic temple Chaucer Street, Nottingham, at an a proximate cost of £25,000. In a rece competition, open to all architects bei Freemasons, in the province, the desi of Mr. John Howitt, F.R.I.B.A., and M Claude E. Howitt, A.R.I.B.A., of Be tinck Buildings, Wheeler Gate, Nottin ham, was placed first. The building w be proceeded with as soon as possible.

Queen's Hotel and New Street Stati Birmingham.

Preliminary to the extension of Queen's Hotel, Birmingham—work wh will involve great alterations at N Street Station on the L.N.W.R. side demolitions of buildings occupying the of the proposed extensions have been gun. A new subway and footbridge, cost £12,000, will form part of the schen for which, it is stated, the chief contr is in the hands of Messrs. John Bowen Sons, Ltd., of Balsall Heath.

Bridge, Berwick.

The proposed route of the new Bor bridge, which is to cross the river Tw at Berwick and link England to Scotla has been so arranged that the Great No Road, London to Edinburgh, will br from its position close to Tweedmo Town Farm, and instead of coming through Tweedmouth by Tweed Dock travel past the farm and come out at west end on to a viaduct which will part of the new bridge. The cost of undertaking is estimated at £80,000.

The Siegwart Floor.

By a regrettable error in printing, block illustrating a Siegwart floor, page vii. of last week's issue, was inver It will be seen in its true position on ference to page x. of the present issue.

London University School of Architect

The following students of this school their designs approved as testimonies study for the Final Examination of R.I.B.A.: Messrs. G. A. Corser, H. Jephson, Miss Mary Sherven, Messrs. J. Watt, A. M. Barrowcliff, B. F. Brue L. Love.

Messrs. John Tanner and Son.

The advertisement of Messrs. J Tanner and Son, craftsmen in plas whose London office, studio, and w are at 45, Horseferry Road, Westmins S.W., appeared on page xvii. of last we issue without the address of their Liver office, which is at 3, 5, and 7, Gill Str Liverpool.

FERRO - CONCRETE

HENNEBIQUE SYSTEM

CONSTRUCTIONAL WORK THROUGHOUT IN FERRO CONCRETE

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esigns & Estimates Free. 19 & 21, Belvedere Rd., Westminster Bridge, S.E.

ELECTRICAL NOTES.

New Tungsten Lamps.

Up to the present the tungsten drawn wire lamp has, for some reason which is not quite clear, been offered only in the pear-shaped or spherical bulbs, in spite of the fact that carbon filament lamps were to be had in their day in all sorts of shapes. Of course, the tungsten filament is a good deal longer than the carbon filament for equal candlepower, owing to its lower resistance, and this has to some extent limited the variations in shape of the bulbs, although it is largely a question of the mechanical arrangement or spider on which the tungsten filament is wound which determines the shape of the bulb. Probably the makers have been so busy selling the bulbs of ordinary shape that they have not found time or room in their works to make bulbs of fancy or special shape, or to give their attention to the design of spiders for the purpose. Anyhow, three of the chief lampmakers of the joint Lamp Conference, namely, the Edison and Swan United Electric Light Co., Ltd., the General Electric Co., Ltd., and Siemens Brothers' Dynamo Works, Ltd., have now introduced simultaneously a squat form of tungsten lamp with the object of throwing most of the rays downwards.

This particular shape of lamp is, however, by no means novel, as it has been used, in the several forms in which it is now introduced, for the carbon filament lamp years ago. Probably it has been out of fashion for some time, or perhaps it was not even made; but at one time, before tungsten lamps were thought of, or even Holophane was being boomed, these downward reflecting lamps were introduced by all the makers and vigorously pushed. In regard to actual design, the present ones seem to follow the carbon filament lamps of the same kind quite closely, and are probably being made from the same moulds. The Royal Ediswan "Downlight" lamp is of squat shape with an elongated neck, over which a separate opal reflector fits and is secured by an adjustable metal sleeve. A polar curve shows that about 75 per cent. more downward light is obtained, just where required, whilst the translucency of the reflector enables sufficient light to be emitted in other directions in order to give a reasonable illumination in all parts of the area to be lighted. The filament is wound horizontally in one continuous length in grid form and spiralised, and in order to prevent sagging it is efficiently supported.

The Siemens lamp, which is called the Wotan "Concentra" lamp, is of less squat shape, without an elongated neck—in fact, it is more like two cones placed base to base. The filament is wound conically, the upper part being wider than the lower, and its wires are almost parallel to the sides of the bulb. The light is therefore projected more downward than in the horizontal plane, even without any reflector, but the lamp can also be had with its top half of opal glass and the lower half of ribbed transparent glass. The prices are hardly higher than those of standard Wotan lamps, and the lamp is stocked in 30, 40, and 60-watt sizes for all standard voltages between 90 and 260 volts. A curve issued by the makers shows that the floor illumination of the "Concentra" lamp is from two to four times greater than that of standard lamps of equivalent candlepowers.

The lamp introduced by the Gen
Electric Co., Ltd., is known as the Osr
axial wire lamp, and is practically
ellipsoid shape. The filament is pra
cally at right angles to the vertical axis
the lamps, so that very little light can
thrown out horizontally. The effect
intensified by the use of an opal reflec
which fits closely on the upper half of
bulb, and is secured by a metal ring.
is pointed out, by reference to a p
curve, that a 30-watt lamp with opal
flector, rated at 25 candlepower, will
nearly 50 candlepower at angles u
30 degrees from the vertical—in fact,
illumination is practically constant o
60 degrees—that is, 30 degrees on e
side of the vertical.

None of these lamps is intended
supersede the standard form of lamp
general lighting, but they are useful wh
a high degree of illumination is requ
in a downward direction without the
of separate reflectors. Such situations
shop window lighting, draughtsm
desks, offices, billiard tables, mach
tools, sewing machines, etc., are
amenable to these downward ligh
lamps, so that there should be a re
market for them to add to, and not to
place, the standard forms.

Waterproofing Rough-Cast.

Rough-casting seems to be particul
liable to the penetration of damp,
much so that many architects are spe
ing Pudlo to be incorporated in the cen
for this class of work. Two recent
stances of its use are Middleton S
torium, near Wakefield, and Bradley
schools.

To Architects and Builders——

You are interested in rendering your building fireproof. Is it not one of the chief points to which you give attention? It is as important that care should be exercised over the electrical installation from this point of view as it is in the construction of the building itself. The unqualified testimony of the majority of the leading fire insurance experts shows that under almost all conditions the Simplex Steel Conduit System is the best that it is possible to adopt for electric light and power wiring. During the course of the last fifteen years this system has been brought to a perfection of standardisation and simplicity, which not only renders it best from a protective point of view, but also the most easily adaptable to all classes of work. Our qualified engineers will always be pleased to wait upon you to give you such information as you may require in connection with the electrical work on your new building.

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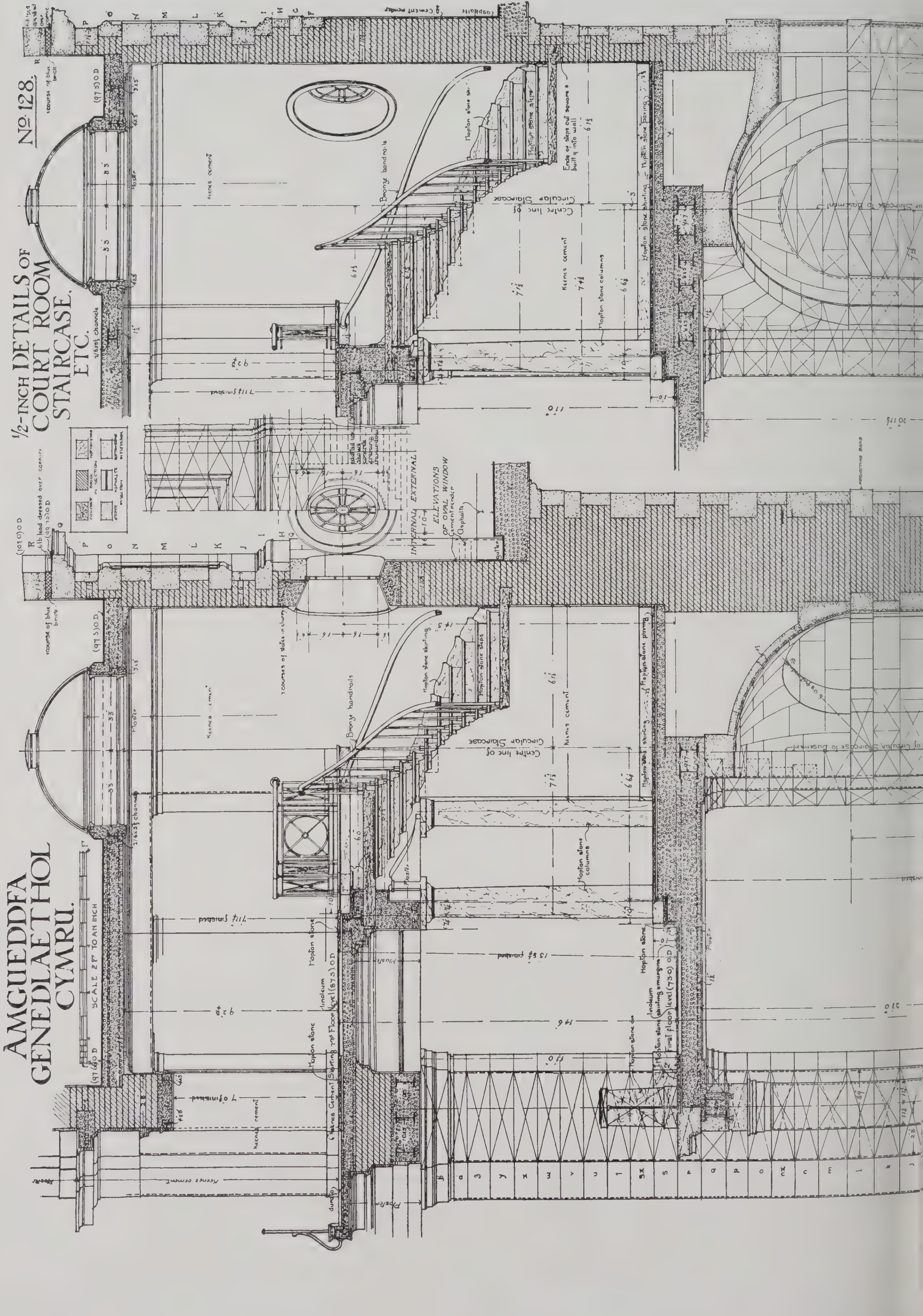
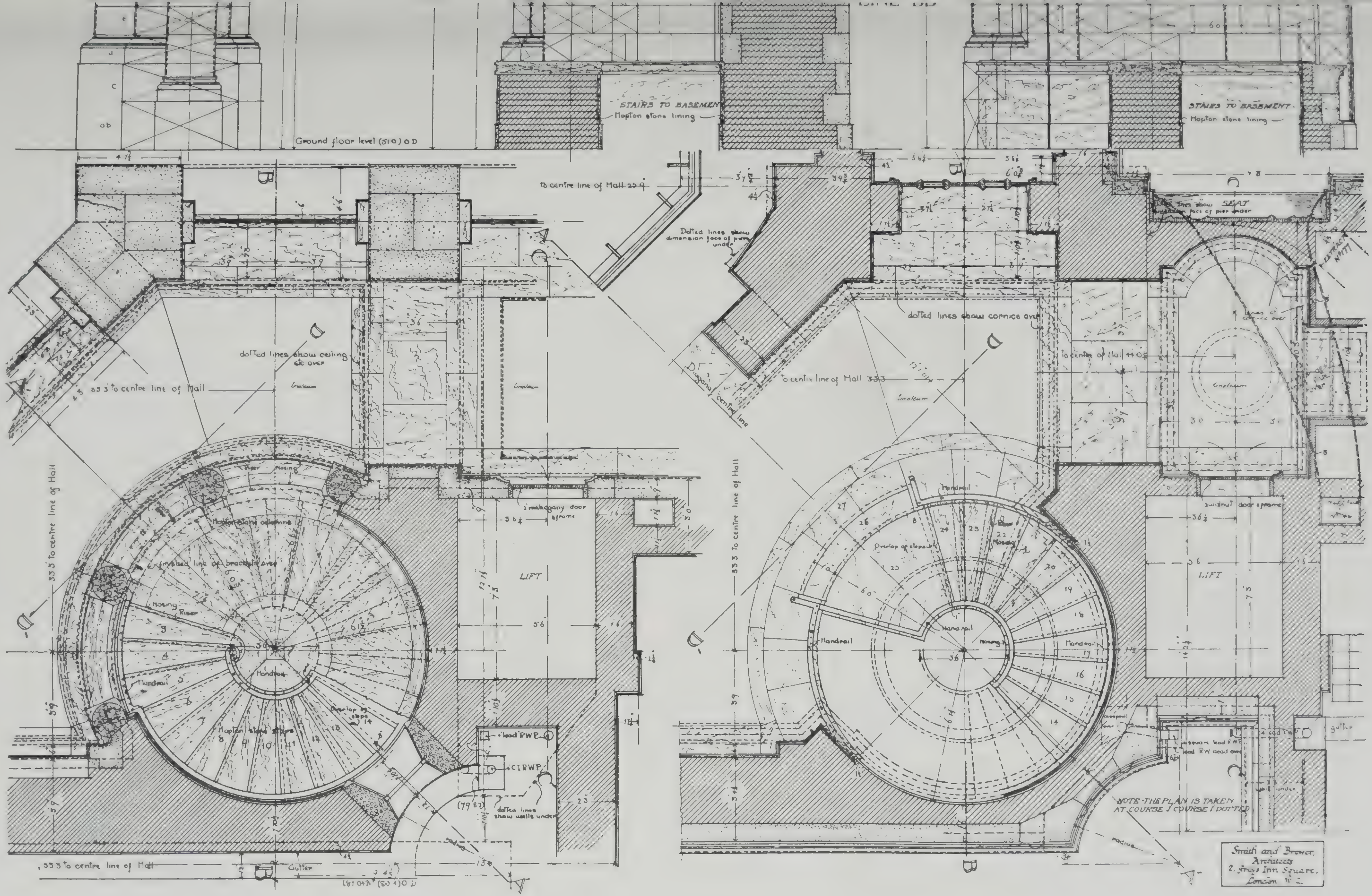
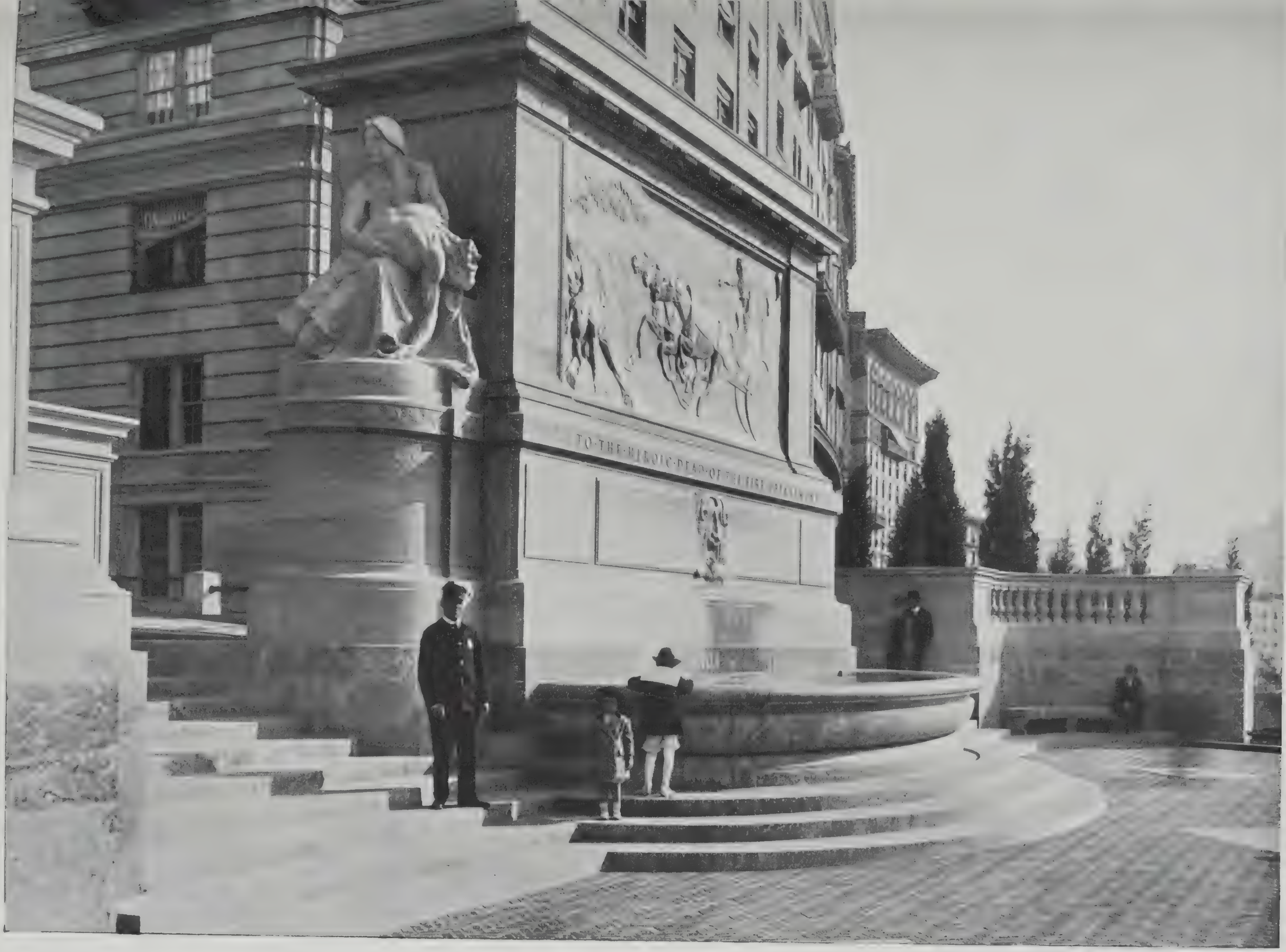

AMGUEDDFA GENEDLAETHOL CYMRU.
SCALE 2FT TO AN INCH
½-INCH DETAILS OF COURT ROOM STAIRCASE, ETC.
No 128.
Bronze handrails
Hopton stone steps
Hopton stone skirting
Centre line of Circular Staircase
Keenes cement
Hopton stone columns
Ends of steps cut square & built 9 into wall
INTERNAL EXTERNAL ELEVATIONS OF OVAL WINDOW
Cement render
Asphalte
gutter
course of blue bricks
6lb lead dressed over cornice
2 courses of slates in cement
Linoleum
First floor level (73.0) O.D
Hopton stone
Plaster
7'11 finished


STAIRS TO BASEMENT
Hopton stone lining
Ground floor level (510) O D
To centre line of Hall 25.9
Dotted lines show dimension face of piers under
dotted lines show ceiling etc over
33.3 to centre line of Hall
Linoleum
dotted lines show cornice over
To centre line of Hall 33.3
Diagonal centre line
To centre of Hall 44.0
Dotted lines show SEAT face of pier under
1 mahogany door & frame
walnut door & frame
LIFT
Handrail
Nosing
Riser
Overlap of steps
Hopton stone columns
Hopton stone steps
lead RWP
CIRWP
dotted lines show walls under
Gutter
33.3 to centre line of Hall
NOTE - THE PLAN IS TAKEN AT COURSE J COURSE I DOTTED
radius
Smith and Brewer, Architects, 2. Grays Inn Square, London W.C.

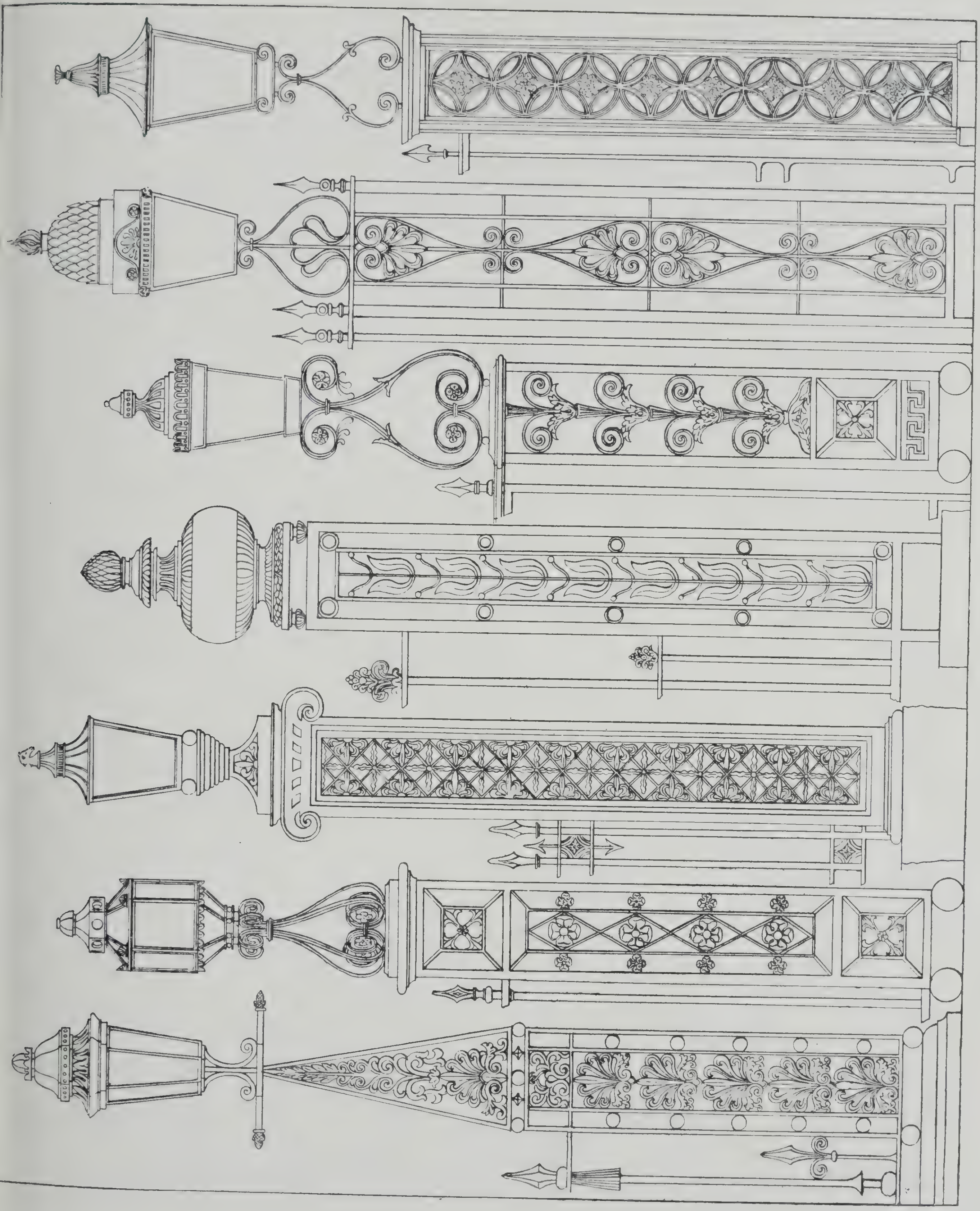
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XVI.—NATIONAL MUSEUM OF WALES, CATHAYS PARK, CARDIFF: DETAILS OF COURT-ROOM STAIRCASE, ETC.

SMITH AND BREWER, FF.R.I.B.A., ARCHITECTS.

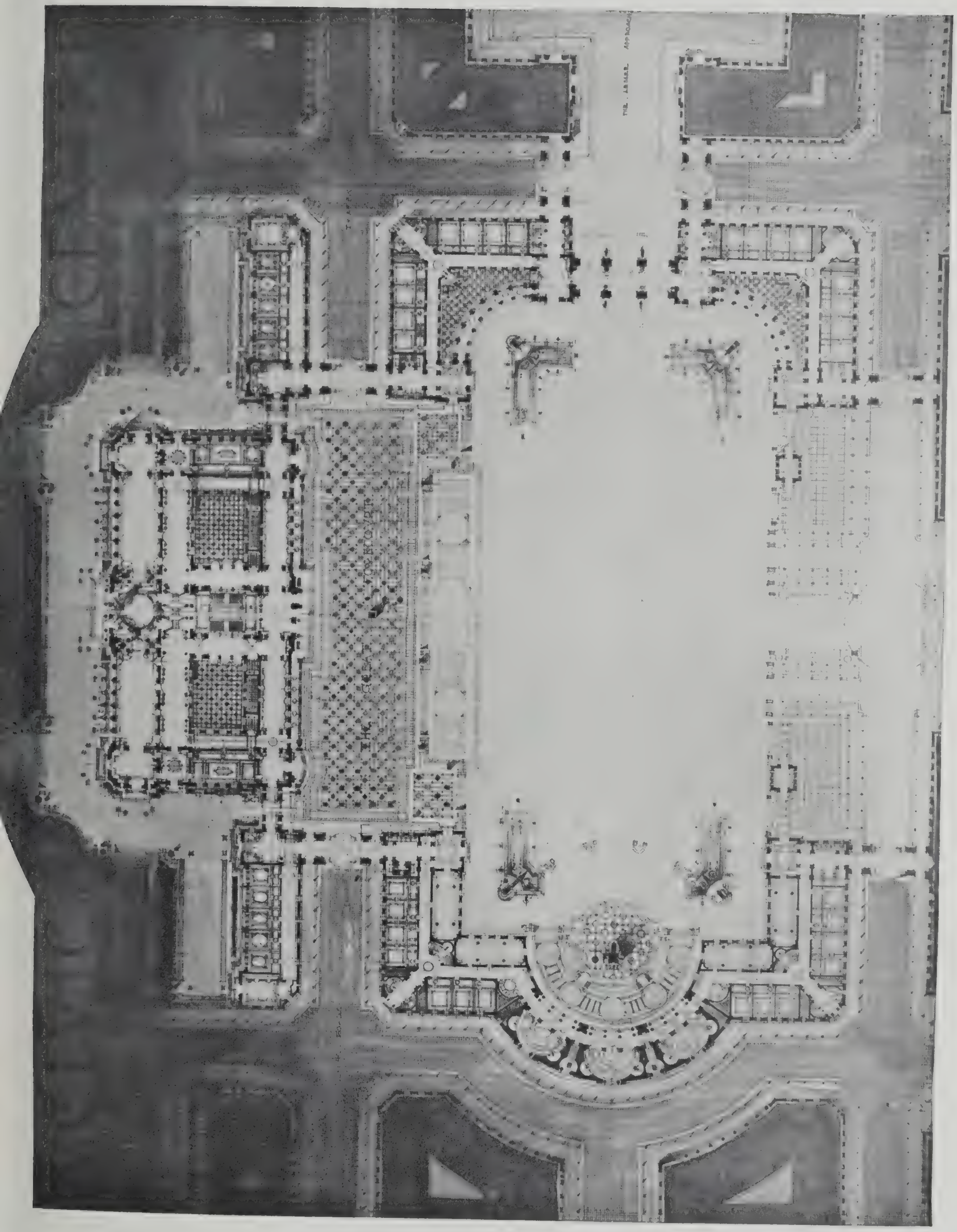


MODERN AMERICAN ARCHITECTURE. III.—MONUMENT “TO THE HEROIC DEAD OF THE FIRE DEPARTMENT,” RIVERSIDE DRIVE, NEW YORK.

H. VAN BUREN MAGONIGLE, ARCHITECT.

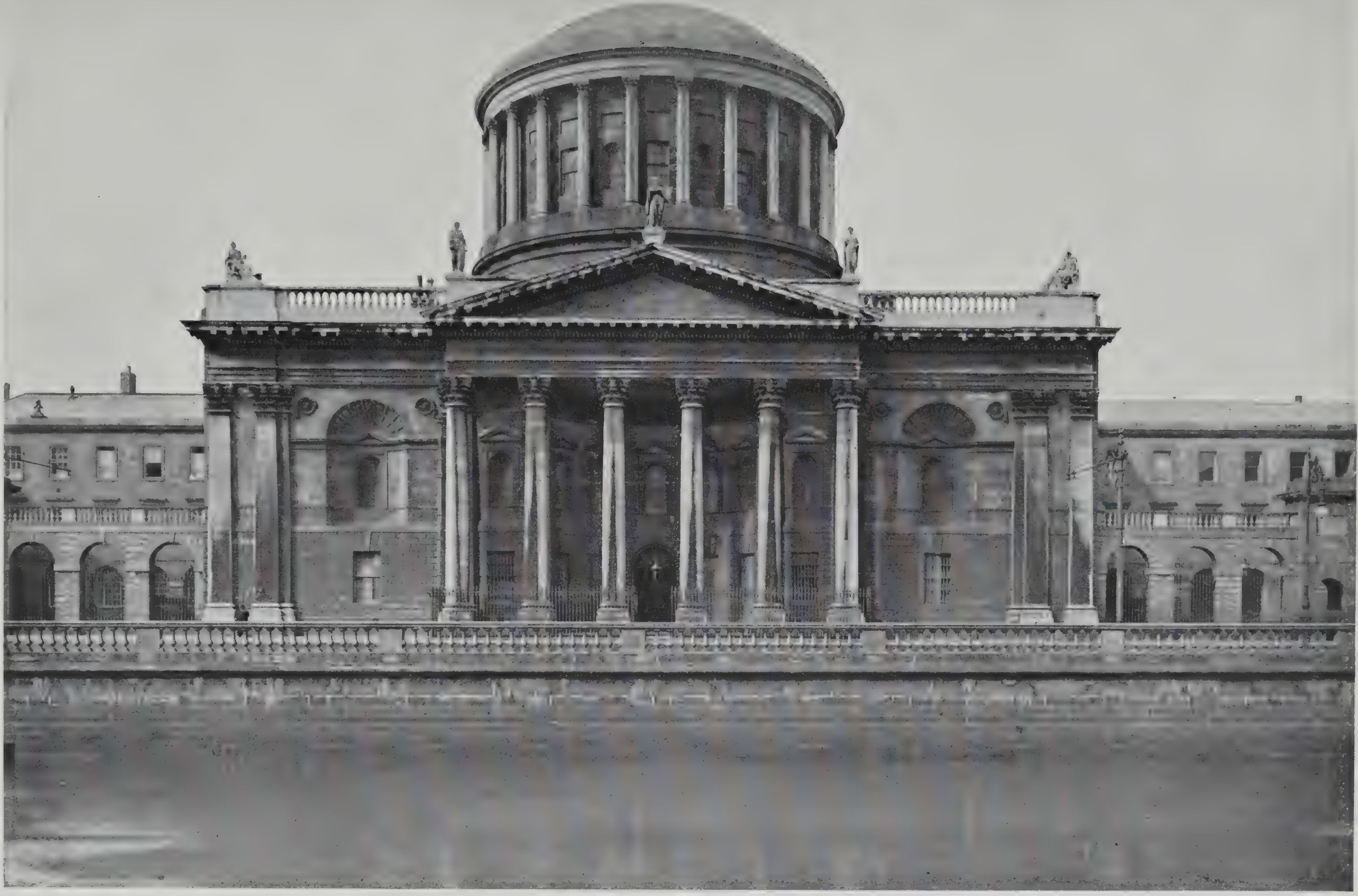


COTTINGHAM'S DESIGNS FOR IRONWORK. III.—PIERS AND LAMPS FOR GATES, AND PALISADE FENCES.



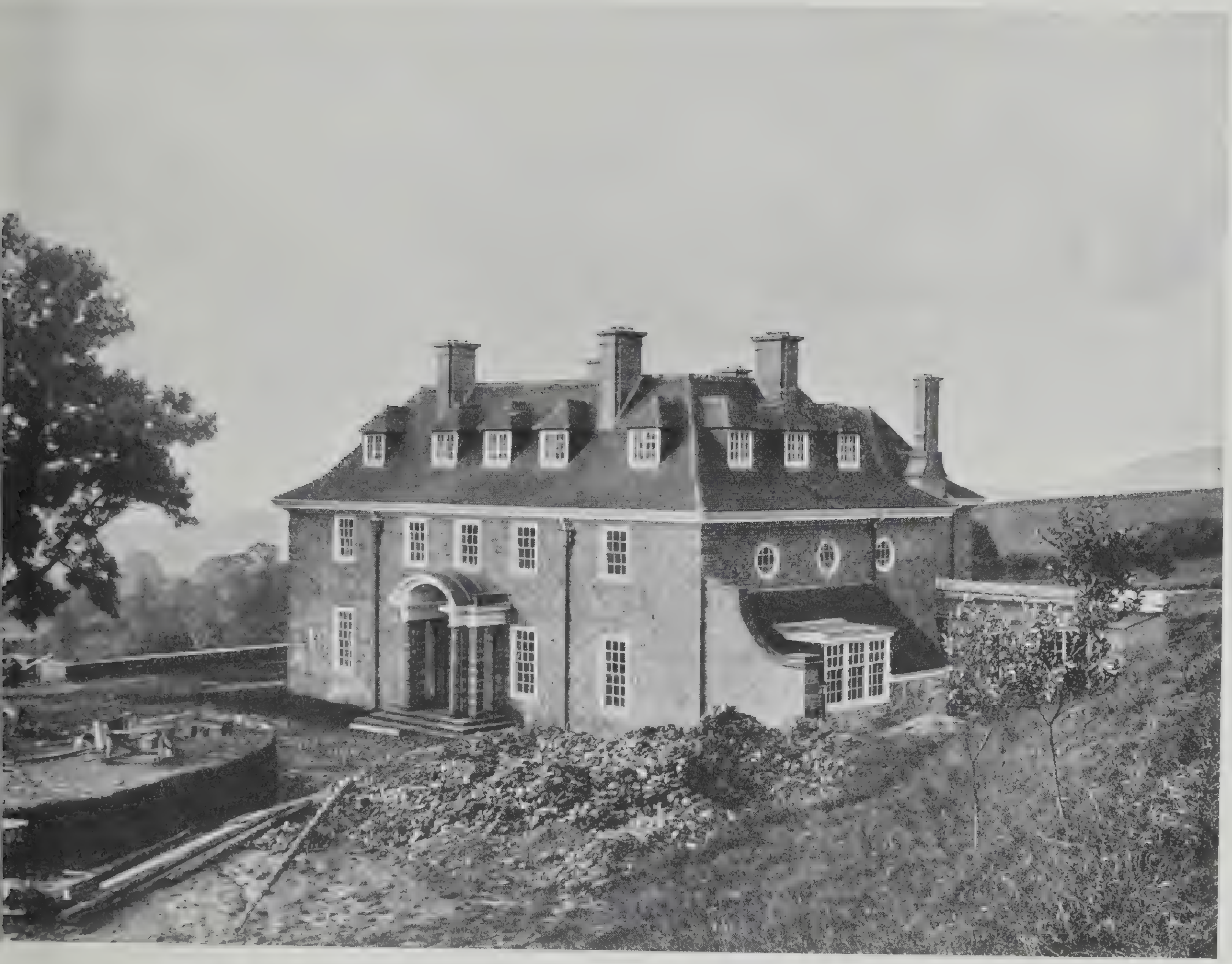
STUDENTS' DRAWINGS. VIII.—DESIGN FOR A CIVIC CENTRE (ROME SCHOLARSHIP IN ARCHITECTURE).

BY LOUIS DE SOISSONS.

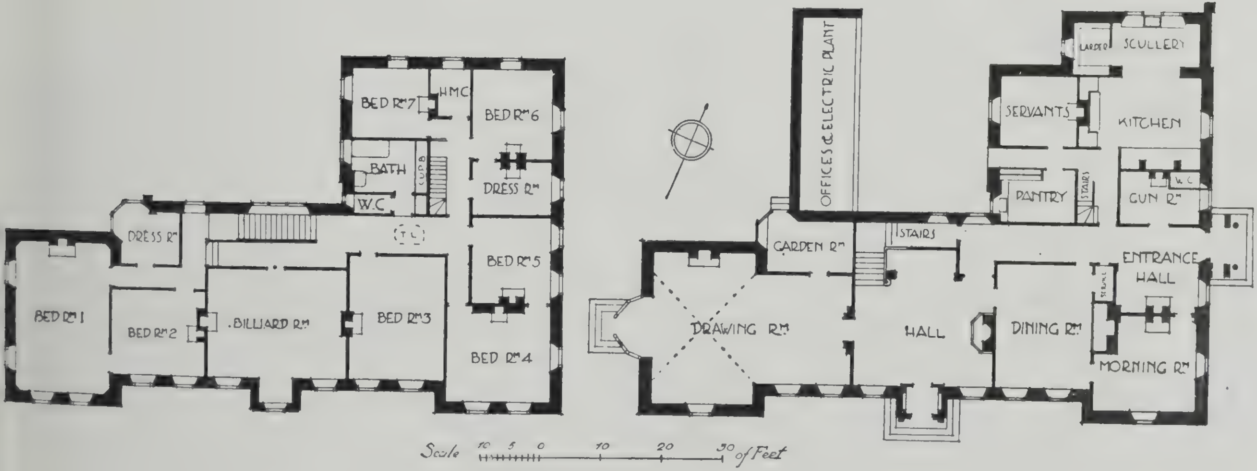


MONUMENTAL ARCHITECTURE. IX.—THE FOUR COURTS, DUBLIN: CENTRE OF RIVER FRONT.

JAMES GANDON, ARCHITECT.

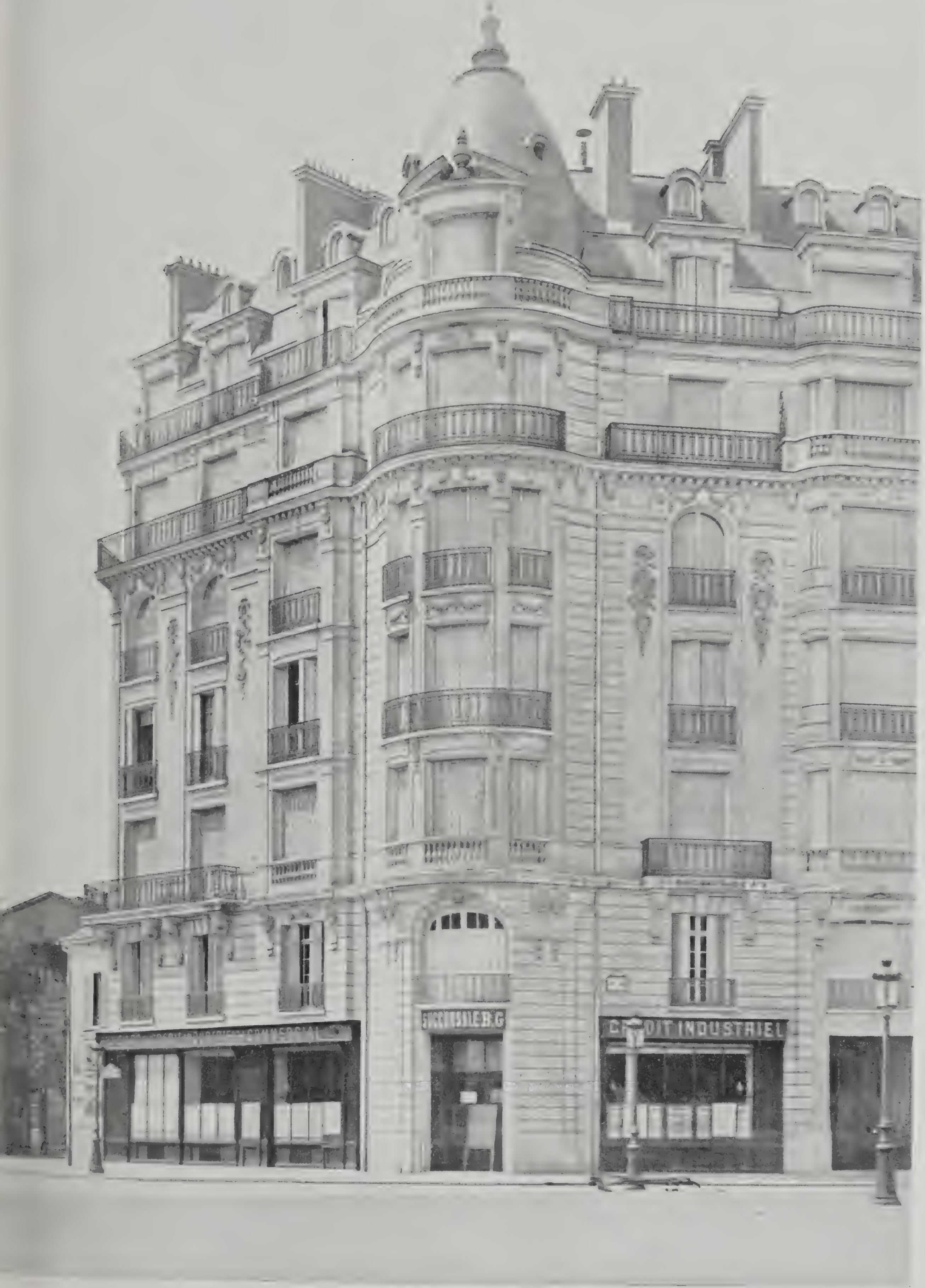


View from South-East.



MODERN DOMESTIC ARCHITECTURE. XXII.—HORN PARK, DORSET.

T. LAWRENCE DALE, A.R.I.B.A., ARCHITECT.

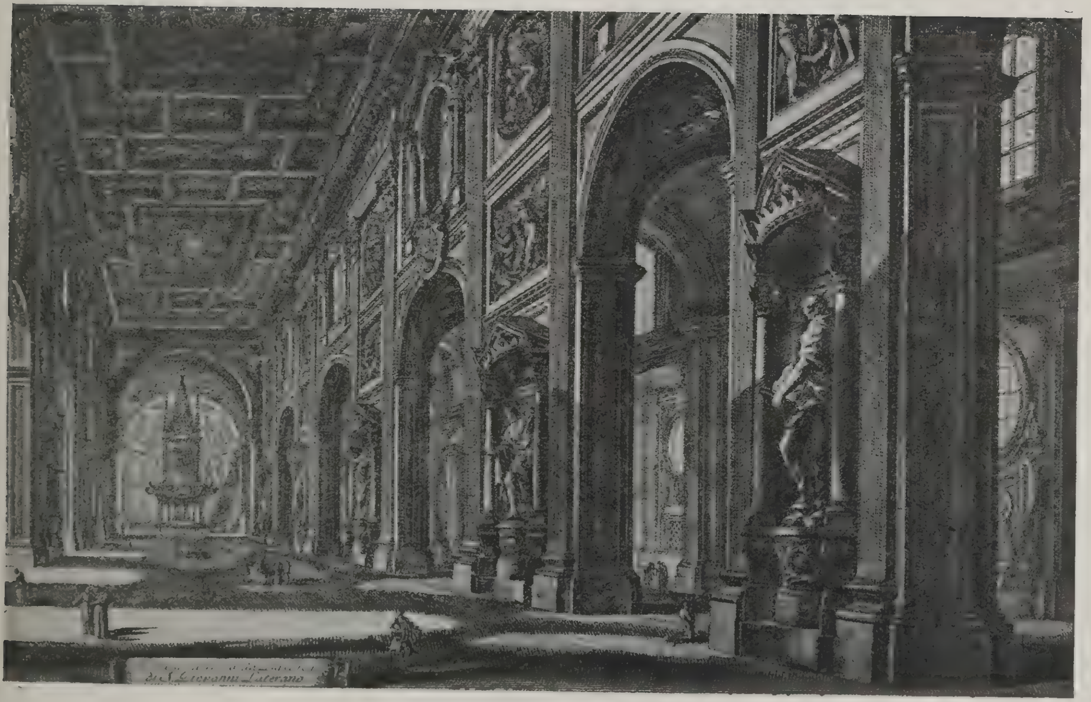


CURRENT ARCHITECTURE. XLVI. - APARTMENT BUILDING, AVENUE DE BRETEUIL, PARIS.

THE ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, February 25, 1914. Volume XXXIX. No. 999.

No. 73



(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

FEBRUARY 25, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 999.

Rural Housing Dangers.

THE problem of rural housing is likely to occupy the attention of politicians and economists for many years to come. It has not, however, been clearly recognised by the public that politicians and economists, although they must naturally take a most important part in any scheme of social reconstruction, are not capable of solving this problem of rural housing by their own unaided efforts.

During all discussions upon the subject it is necessary to insist that the authorities responsible for the carrying out of this reform will produce a condition of irredeemable chaos unless the architect and town-planner are allowed to have no small influence in determining the character of the new agricultural towns and villages that are destined to come into being. The point to be insisted upon is this—we must think in units. We have to re-design the country side.

The broader aspects of rural housing have been discussed for the first time in an article by Professor S. P. Adshead, entitled "Town Planning and the Rural Problem," in the current number of the "Town-Planning Review," the quarterly journal of the Department of Civic Design of the School of Architecture at the University of Liverpool, and we cannot do better than draw attention to some of the conclusions at which he arrived. While welcoming the policy of Mr. Lloyd George in so far as it is founded upon a belief that the prosperity of the rural labourer will follow from the application of more scientific systems of production and consignment and from improved conditions of farming, Professor Adshead utters a grave warning against the consequences which will ensue if our legislators fail to realise the full magnitude of the problem with which they are faced, if development is allowed to take place by means of "patchwork" legislation, or if an attempt is made to settle the question of housing by mere juggling with plans or the clever adoption of by-laws to existing conditions. "Real improvement," he says, "undoubtedly lies in the adoption of some such sweeping policy as has been outlined by Mr. Lloyd George." But if it is prosecuted "without regard to anything but the obvious, with an eye merely to comfort and cheap economy, the blunders of the industrial revolution of last century, which produced such awful conditions of city life, will again be repeated on the land."

Professor Adshead draws a lurid picture of the England which would come into existence if we assumed that "without let or hindrance, without plan or preparation the wheels of the revolution in rural industrial organisation were set in motion." He has visions of open country traversed by black asphalted tracks, of huge cattle-kraals hastily built of tin or concrete, or roofed with some exotic material, of congregations of Government-built cottages that have no relation to any ancient landmarks, of huge granaries or stores that break the gentle undulation of the sky-line, of chimneys of refuse-destructors insolently lifting up their heads usurping the proud privilege of the church with its ivy-mantled tower, of urban suburbs of a modern and eccentric type. And the towns w
happened to be situated in an agricultural dist
would grow in size but not in grace; they would h
rows and rows of concrete cottages roofed with pat
tiles, having lead-light casement windows of the
proportion, brass knockers, electric bells, pretenti
halls and perfect drains. "The streets would
asphalted, channelled, and curbed with narrow g
borders inset and raised, suggesting the mounds
newly made grave. There would be railway sidi
goods yards, abattoirs, store-houses, dairies, facto
gas offices, power stations, and a system of gas, wa
and electric mains, all owned by different compa
and arranged in a haphazard manner. Immedia
around there would be acres and acres of untidy a
ments, and further afield miles of bare, bleak, and o
pasture and arable land."

What are Professor Adshead's constructive
posals? We can only indicate a few of them h
In the first place he pleads for an increase in the po
contained in the Town Planning Act, which at pre
does not apply to railways, canals, or Governm
lands. He is of opinion that the sudden interjectio
new systems of farming, new aggregations of cott
and buildings, will make it necessary for practically
whole of the country to be parcelled out and plan
He would set aside certain areas for arboricult
others for sheep-farming, others for dairy prod
others for cultivation, and others for the founding
entirely new villages and towns; districts especi
renowned for their natural beauty would be fe
round and preserved as park and pleasure-ground.
one of the first requirements of systematic farming
be improved facilities for the transport of farm prod
it will be found necessary to improve many of
country roads, and the national road system that w
subject of discussion at the recent Town Plan
Congress must be brought into being. In Profe
Adshead's ideal England, a national transport ser
for collection and distribution as complete as the p
service would be set up, labour-saving machinery
implements for farming would be let out by agr
tural combines, and much of the land would be den
of its hedges and ditches to enable larger areas t
dealt with at one operation of the plough. He does
share the ordinary Englishman's attachment to
small hedged field. "The conversion of separate f
into endless plains," he says, "dotted with shelters
cattle and with a few old cottages nestling at dis
intervals amongst clusters of tall trees, if carried ou
a landscape painter who was truly inspired, woul
much grander and finer in conception than the br
up country as we see it to-day. Our hedged and dit
midland plains are positively ugly when compared
a glimpse of the Savoy, where lines of regular po
extend to the horizon marking the way; and the
an incomparable grandeur in a Kent Marsh and
Sussex Down."

It is to be hoped that, amid the clamour of politic
and economists, the voice of the artist will be hear

A. T.

English Drawings for Paris.

IE exceedingly happy idea of holding, at the Architectural Association last year, an exhibition of the work of Paris Ecole des x-Arts students has its natural corollary in invitation by the Société des Architectes més, of Paris, to the Royal Institute and Architectural Association to send across the nel a similar collection of the work of British nts. Accordingly a joint committee of the Insti- and the Association has been formed for that t. It was at first intended to send over none but nts' drawings; but there is, no doubt, much wis- n the ultimate decision to extend the scope of the ition, which is to be in three sections, comprising ctively historical, modern, and students' work. In ere matter of draughtsmanship, English students, s to vastly improved educational facilities, have the past few years made astonishing progress, ndeed, as was remarked by Mr. Reginald Blom- and Mr. Cave last week, already show enough plishment to justify the warning against attach- o much importance to this mere means to an end. theless, our youths are not yet in a position to nge comparison with their French compeers; and compliment to Paris, as well as a counsel of pru- , to strengthen the exhibition with work which, good fortune it can be made fairly representa- vill be found not unworthy of the attention of h architects. Such exhibitions ought by all to be perpetuated and extended, for they are sly an important means of stimulating endea- s well as promoting international sympathy and ring the cosmopolitanism in art from which we side of the Channel have been too severely d. It is understood that the exhibition will be early in May by the President of the French lic—a signal honour that should incite the joint ttee to redouble their efforts to be equal to the n.

St. Mary-le-Strand.

T Sunday was the 200th anniversary of the lay- ng of the foundation-stone of the Church of St. Mary-le-Strand, and in memory thereof the ser- as honoured by the presence of the Bishop of n. It may be recalled that the design of the church was not carried out without serious to its architect. James Gibbs's original idea erect a small campanile at the western end, and a column, 250 ft. high, crowned by a large of Queen Anne, about thirty yards from the ont. The work was already in progress when mmissioners altered their minds and ordered a in place of the campanile; simultaneously the the column appears to have been dropped. It ult to say whether the campanile would have ood or bad, but there can be little doubt that er merit it possessed would have been entirely ed by the column. It is, in fact, one of the few history where Commissioners have been right architect wrong. If the former erred at all, it approving the design in the first place, when viously allowed their loyal zeal (not to mention Gibbs) to triumph over their artistic judgment.

The Multiplication of Museums.

HREWD Eastern observer of Western modes, ommenting on the prevalence of museums in uropean capitals, has given it as his opinion museum habit is a symptom of the loss of in a nation's art. Art, he contends, if it is ourishing, lives outside museums and dispenses m. There is enough truth in the suggestion one ponder when one hears of projected new s for this purpose; more especially when one ers such a scheme as the latest from New York City, according to which it is proposed to erect a group of twenty museums, to be known as "The Museums of Peaceful Arts," for the immediate and prospective housing of a corresponding number of industrial or fine arts. The building of museums is often architecture's opportunity; but it is a little sad to think that a noble façade or a fine roof may merely screen so many symbols of a nation's artistic decadence—may even, in spite of appearances, be one of the symbols. Perhaps, however, it is not so bad as all that. In America, at any rate, the vitality of current architecture would suggest that it certainly is not.

Internal Economy.

ANY counterblast to the peddling utilitarianism which is one of our besetting national sins is as a cordial to a sinking spirit. Sir Charles Waldstein, in the second of his three lectures on "The Relation of Industry to Art," delivered before the Royal Society of Arts, rendered this much-needed service. He said, in effect, that, even when we build nobly, we decorate meanly. Huge sums are expended on the rearing of sumptuous buildings—palaces, churches, and great public offices—"but in how many cases were the sculptures in the pediments, the figures in the niches, or the friezes in relief the work of the leading sculptor of the day?" Perhaps "sculptors," in the plural, is what Sir Charles intended; but in quoting him as he is reported we are reminded of the inveterate tendency to overwhelm one man, be he painter, sculptor, or architect, with excess of work, to the undue neglect and callous deprivation of the others, some of whom are palpably superior to the spoiled darling of the moment. That, however, is a side issue; and the lecturer's main contention is irrefragable. As he said, a proportionate amount of the cost of a magnificent building ought to be set aside for its adequate decoration; and perhaps he was right in adding that the architect ought to insist on such co-operation with his colleagues in the world of art. Why does he not so insist? Certainly not because he is unwilling to make his building glorious within as well as without, but because of the prevalent gouty-handedness of the purse-bearers, from whom it is difficult enough to extort sufficient money to secure sound construction and a decent elevation. To press them for a commensurate amount to be expended on "mere adornment" would be, in many instances, to kill the project, or to hand over the work to some less "visionary and utopian" practitioner. On the Continent and in America an architect may give such advice without bringing his sanity under suspicion; in fact, he would be found wanting if he withheld it; but in our own country the art-sense is still—let us put it as politely as may be—in process of development.

Stringency and Laxity.

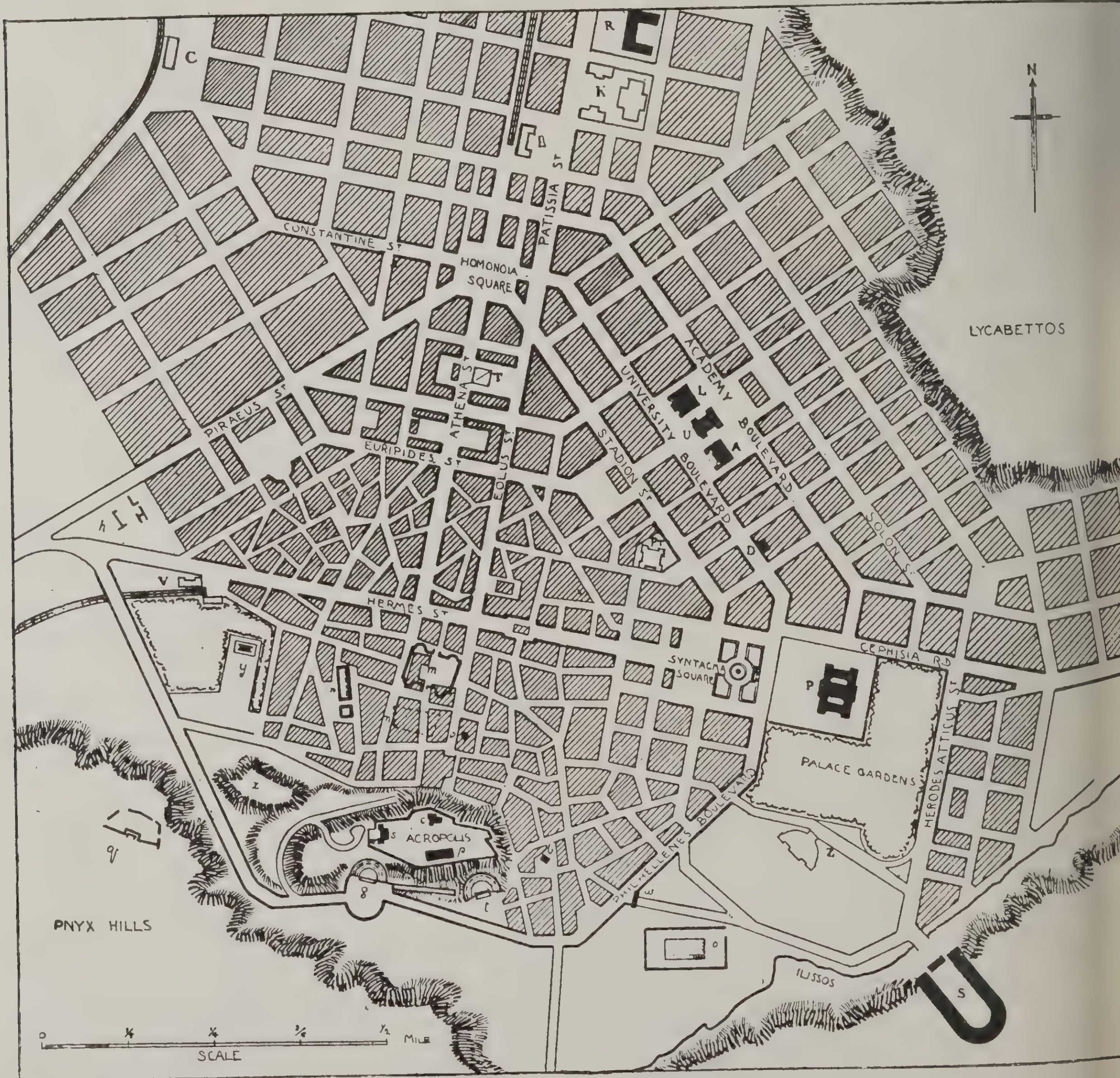
BY-LAWS, no doubt, are often ridiculously stringent where their incidence happens to fall upon conditions which were not those that were chiefly in contemplation when the regulations were framed. But while cheerfully making this admission, we must nevertheless confess to a certain feeling of misgiving as to the danger of going too far in the opposite direction. There is a marked tendency to reduce streets to the narrowest permissible limit, and rooms to the smallest allowable area. As a case in point, a Carlisle sub-committee have recommended that application be made to the Local Government Board for a Provisional Order of which the effect is that 9 ft. shall be substituted for 10 ft., and 8½ ft. for 9 ft. as the respective heights of ground-floor and upper rooms. If the choice lay between two evils, we should have no hesitation in preferring stringency to laxity; and we fear that reaction against the former has set up a retrograde movement which should be carefully watched lest it carry us too far in the opposite direction.

THE RE-PLANNING OF ATHENS.

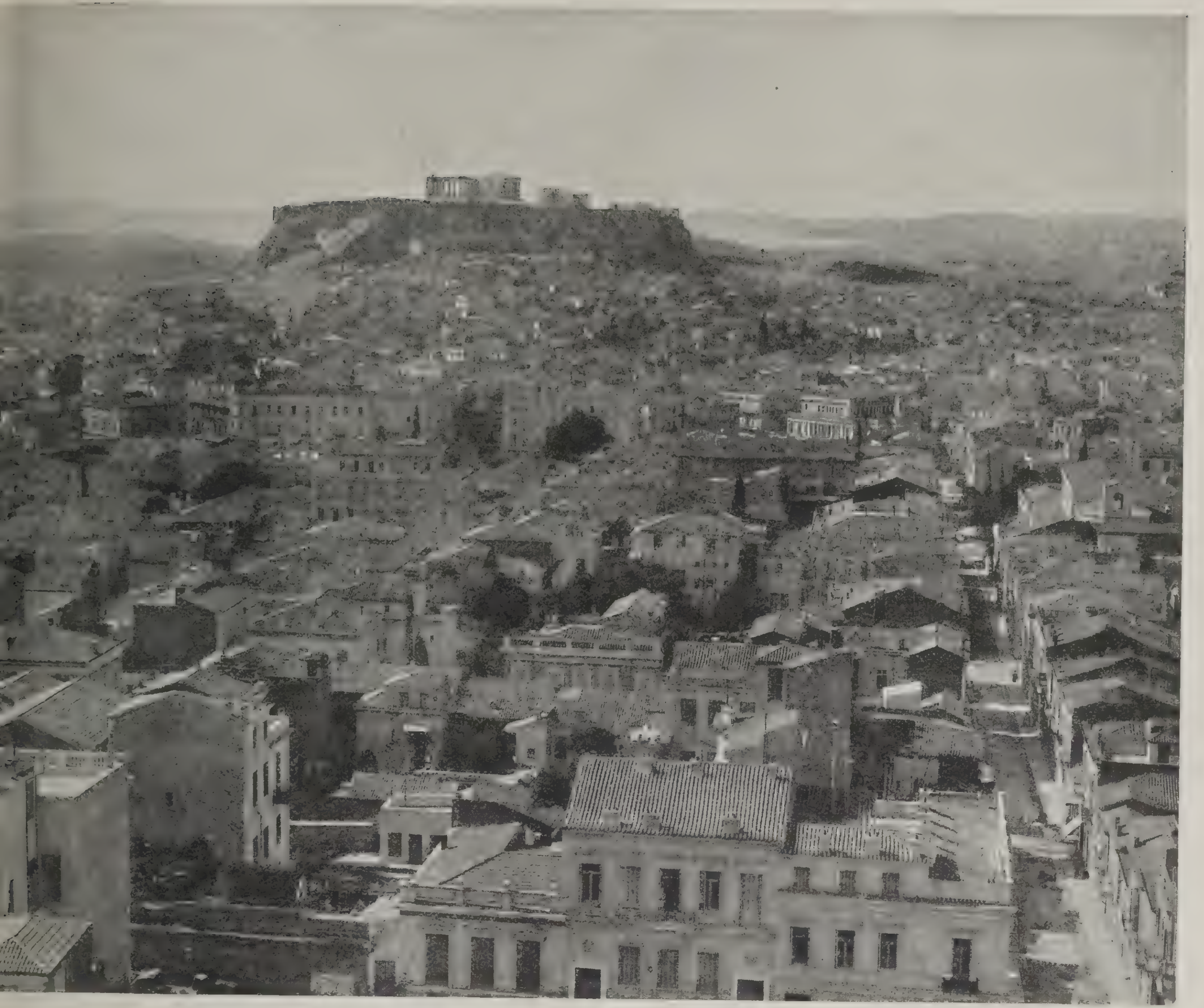
THE news that Mr. Thomas H. Mawson, special lecturer in landscape design at Liverpool University, and head of the firm of Mawson and Sons, has been commissioned to prepare plans for the extension and remodelling of Athens has naturally been received with gratification by all who have at heart the prestige of British Architects. The compliment is enhanced by the fact that the choice was made on the personal recommendation of King Constantine and the Queen of Greece—as a result, no doubt, of the work by Mr. Mawson which has been designed, and is now being carried out, in connection with the gardens of the Royal Palace at Athens and Corfu, and the Royal burial ground at Taboi. The experience thus gained will be of immense value in the larger task that is contemplated. We are indebted to the "Manchester Guardian" for the account of an interview with Mr. Mawson, in which the main outlines of the suggested improvements are indicated. One of the most immediate necessities is to provide a site for the new Union Railway Station, which it is hoped to make a worthy portal or entrance to modern Athens. Then the hovels and shanties that have grown up round the Acropolis and the ancient ruins of Athens are to be cleared away; various other removals will be effected, and a careful survey will be made of all t areas over which future excavations may be ducted. A great road is to be constructed betw Constitution Square and the Zappeion Gardens to Acropolis and round the base of the ancient r Sites are to be found for new Government buildi a great water scheme is contemplated ; and there be a new system of public parks, gardens, and bo vards. The work contemplated, indeed, is likel occupy many years.

Mr. Mawson's plans will be awaited with interest that attaches, in our mind, to anything cerned with the greatest of all founts of architec inspiration. In the meantime it is opportune to back to the first planning of modern Athens afte conclusion of the War of Independence in 1834, to the scheme of Schaubert, the talented Bav architect, who was mainly concerned therewith.

To begin with, the scheme of Schaubert was m by one initial error which it will be the business of Mawson to remove—at incalculably greater exp than would have been incurred had the matter dealt with at the outset. This error was the rete of the collection of miserable dwellings on the nor side of the base of the Acropolis, combined wit



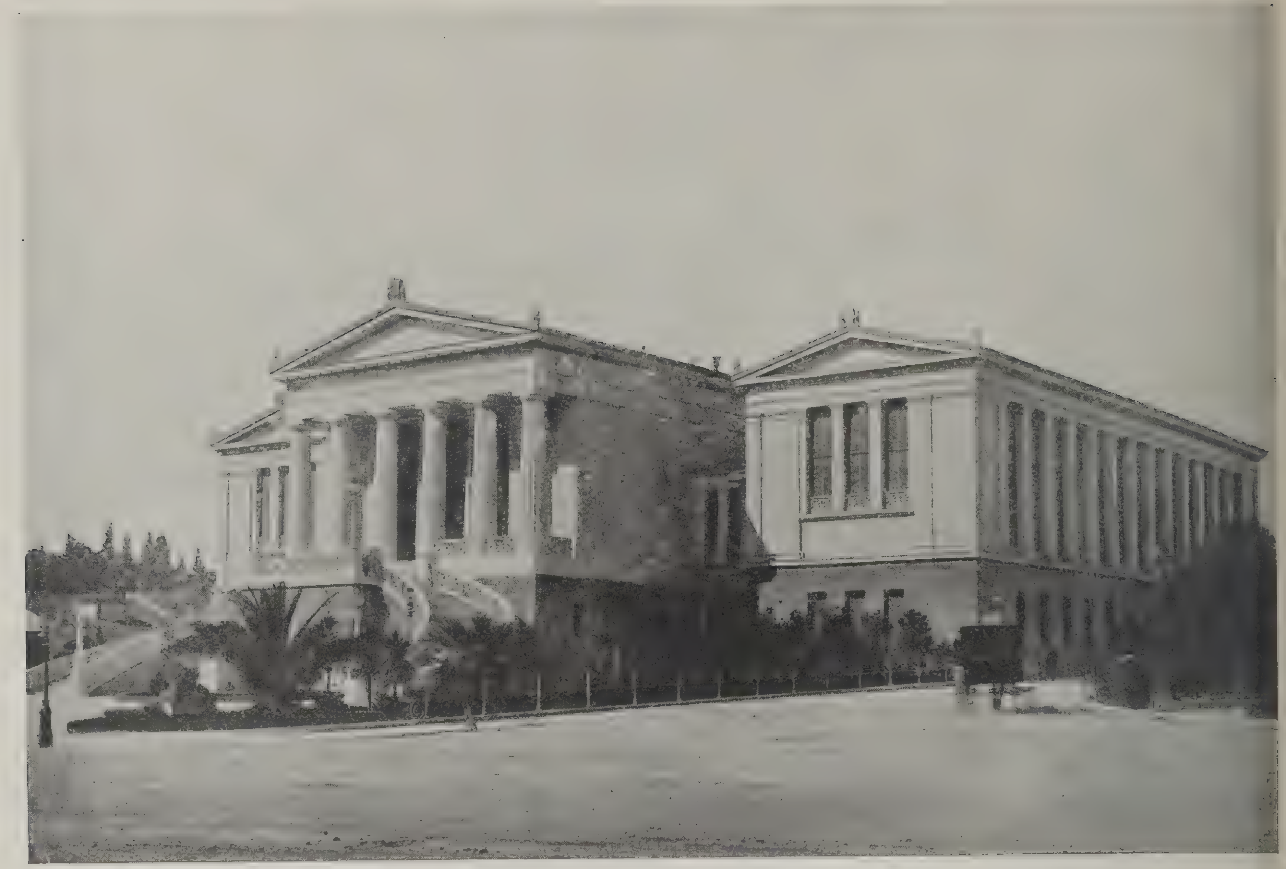
SKETCH PLAN OF MODERN ATHENS.



GENERAL VIEW OF MODERN ATHENS, LOOKING TOWARDS THE ACROPOLIS.

nce of any steps to prevent its growth. Grown it
and with it have grown vested interests which will
to be adjusted before this district can be brought
the general scheme of beautification. Apart from
Schaubert's handling of the problem in its main
is commendably simple and direct. Mr. Lionel
den, describing modern Athens a year or two ago
personal observation during an extended visit,
led its features as follows: "In the disposition of
treets and boulevards a triangular arrangement is
ted, of which Hermes Street, running east and
, is the base, and Piræus and Standion Streets are
ides. The northern apex is marked by Homonoia
re, the eastern angle by Syntagma Square, and
western by the Dipylon. Bisecting the apex is
na Street—itself intersected by streets parallel
e base of the triangle and by two squares. From
ases of Piræus and Stadion Streets respectively
tangular network of roads and boulevards con-
s outwards for about a third of a mile in either
tion; those on the Piræus Street side terminate
ularly on the level plain, and those related to
ion Street ascend the slopes of Sycabettos some
nce; on this latter side, between the Academy
University Boulevards, is one of the largest
res in the city. North of Homonoia Square a
ar network of roads extends on the axis of
na Street; of these Eolus Street is continued
ward through the mediæval quarter, its vista
disposed in relation to the ruins of the Erech-
n, just as that of Athena Street terminates with
the mass of the Propylæa rising clear on the western extremity of the Acropolis.

"The city is broadly divisible into five districts, of which the first, beginning south of the Acropolis, may be described as the Archæological area, and defined as extending from the Theseion on the west to the Stadion on the east, and including in one open park the Pnyx Hills, the Acropolis with the Odeon and Theatre below, and the Temple of Jupiter Olympus. The second, the old business quarter, is that which extends northward from the Acropolis to Euripides Street, and is the bane of modern Athens. The only formal thoroughfares penetrating it, Hermes, Athena, and Eolus Streets, are occupied chiefly by the shops of retail traders, while the congested areas comprising the remainder of the district consist of slum property and the poorer kind of commercial offices. The fourth district constitutes the finest part of the city—the parallel Stadion, University, and Academy Boulevards, the National Museum and Polytechnic Institute, Homonoia Square, and the formal *places* between it and Euripides Street; and at the south end Syntagma Square and the Royal Palace and garden. In this area, which is known as the Neapolis, are grouped nearly all the best public buildings, offices, hotels, shops, etc. A wealthy residential quarter, following the line of Cephisia Road for about a mile to the east of the Palace, forms the remaining district. The traffic centre of the whole city is Homonoia Square. Adjoining it are the termini of the three railways, which are all that Athens can boast"—at present.



THE NATIONAL LIBRARY, ATHENS. THEOPHILUS HANSEN, ARCHITECT.

Undoubtedly, the finest group of buildings in the city is that comprising the National Library, the University, and the Academy. We reproduce the first and last of these; both are generally acknowledged to be superior, both in design and scale, to the University building which they flank. Both were erected from the designs of Theophilus Hansen, of Vienna, with whom Ziller co-operated as "supervisor"; and both have exercised a considerable influence on the lesser modern architecture of the city. It would, in short, be difficult to dissociate them from the architectural element in any town-planning scheme. As a whole, the city architecture is at present lacking in formal cohesion. Probably, in proportion to its size, Athens can show as many buildings of individual merit as any capital in Europe; but its street and place architecture shows little evidence of symmetrical grouping. There are few continuous façade treatments—nothing in the spirit of the Rue de Rivoli or of the Place de la Concorde. Syntagma Square is perhaps the best of the *places*. "The buildings, though unrelated, approximate to each other in height tolerably well, and their composition does not present conflicting contrasts. The *place* itself is unencumbered, and its larger area can be definitely realised as a regular geometric form. Moreover, it is in direct relation to the Royal Palace, which, whatever may be its faults of design, is in size at least able to sustain the demands of its position. . . . But in most cases individual considerations have prevailed over general in design, with results that are the more to be regretted, since the lines of the streets, and of the squares especially, lend themselves to purely formal and regular treatments. The latter are not complex nor greatly broken, for the systematic intersection of streets at right angles has made the provision of spaces a simple affair. To obtain a clear area either for the purposes of providing a fresh-air space, or to obtain a proper setting for a building, it has merely been necessary to omit construction on one or more of the island sites, or, if this decision has been arrived at after the development of the district, to remove prope
already existing. In consequence, almost all t
places throughout the city are rectangular, a
only the differences of their relative dimensions p
vent their appearing monotonously recurrent forms

The above lines may suggest the character of t
problem in front of Mr. Mawson, its opportunities a
dangers. Meanwhile, a good deal has happened t
must profoundly modify any scheme of the cit
development. From the fury and terror of the Balk
wars has emerged not only a new Greece, but a n
Greek patriotism; not only an enlargement of territo
but a new civic pride and a vast ambition for co
mercial expansion. A few years ago Athens appea
content to be an "assemblage of archæological scho
and musea," and it seemed fairly safe to prophesy t
her civic development would proceed in harmony w
this ideal. To-day, when the migrated Athenia
grown rich, are flocking back to their capital, and
already considerable business prosperity of Pira
promises to be increased a hundredfold, a set of pur
industrial conditions has arisen which Schaubert,
instance, could never have contemplated. For t
reason Schaubert's scheme, which, though ne
followed in its entirety, has since been the basis of m
civic improvements in Athens, cannot really domin
any town planning scheme of the immediate futu
although, notwithstanding its limitations, it m
necessarily be taken into account.

To-day Athens has social problems to solve, a g
deal more complicated than those familiar to the a
of her resurrection as a city, and it cannot be expec
in her case, any more than in ours, that they will
influence profoundly the designing of her buildi
and the planning of her streets. England, in comm
with the rest of the civilised world, owes so much
artistic, and, above all, of architectural example a
inspiration to Greece, that we are delighted with t
opportunity of repaying some small portion of
immense debt of honour.

HERE AND THERE.

N artless person alighting in the midst of the
architectural world of to-day would find himself
confused by the number of clamorous voices,
proclaiming the one and only true faith. I can
gine a select deputation of English architects pre-
d, individually, to indicate the primrose path. It
ther risky for me to set down what I opine to be
views of other men, but the attempt may not be
out interest. I will suppose, then, that Mr.
inald Blomfield would bring all his authority and
nright emphasis to urge that we should take up
thread of architecture where Sir William Cham-
dropped it. Chambers is, indeed, a name to conjure
the name of a man who has not yet had half the
gnition that is due to him. He has always seemed
a singularly gifted architect. His work displays
arship to a marked degree, and there is a grace
a feeling of architectural rightness about his
ior decoration that claims for him a place of dis-
on. Every one is familiar with the exterior of
erset House, but the interior is almost an unknown
just as the many private houses that were erected
Chambers's designs in London and elsewhere are
ically unapprised by the bulk of the profession.
usly enough, his buildings have never been ade-
ly illustrated, though they well deserve to be. As
igner of interior decoration he was an undoubted
r, his schemes for ceilings, such as those at Mel-
e House and Carrington House, being especially
orthy. Well then might Mr. Blomfield advocate
ve should follow under the banner of Chambers.
here are plenty of people who would be ready to
ree with this proposal, holding the opinion that
ere is the hope of the future to be found. Pro-
Reilly, and those who think with him, would be
to advocate a return to the fountain-head of
ecture. They would have nothing to do with the
ture styles, nor with the various phases of Renais-
which spread throughout Europe, following the
of Italy, but would go instead right back to
e, basing modern work on the purest types—
mply copying these forms, but assimilating the
lying spirit and infusing it into our own. Here,
however, there would be dissentients, who
not countenance the model of Greece nor that of
enaissance. They would want to return to what
y term vernacular architecture. I suppose they
take as a standard some of the beautiful work
was done in Tudor England and show us what
be developed on these lines. There are again
—Mr. Voysey, perhaps, among them—who
be ready to advocate an essentially modern type
gn, putting aside all such things as "the Orders,"
ould vehemently decry these, forsooth, as part
arcel of mere "shirt-front architecture," forms
d on a background with which they have no
c relation. Mr. Prior would probably come
with another advocacy—scholarly and philo-
al, certainly; but I do not know whether he
join hands with Mr. March Phillipps in a pane-
n the possibility of the "back to the workman"
ut I feel sure he would not support a Greek, nor
mbers, nor a Voysey scheme. On the whole,
re, the artless person seeking for guidance
find himself in a predicament, and it is my pre-
tention to leave him in the midst of it.

* * * *

e mighty monograph on the work of Charles A.
which has just been issued, there is a passage in
ly introduction by Mr. Royal Cortessoz that is
ggestive of the influence which an architect may
n his client. Mr. Platt, whose work I greatly
as the best domestic architecture being done at
sent time in America, has had a large number
wealthy clients. There is no doubt that the
palatial houses of Europe, seen on the world tour by prosperous Americans, remain enshrined in the memory of the travellers on their return to Ill., Mass., and N.J. In some cases this has resulted in replicas of the conceits of Hatfield or Haddon Hall, the refined pomp of Versailles, or the sumptuousness of Rome and Florence, and the effect has been far from commendable. There is something very unbeseeming in your rich American smothering himself with all the trappings of a Cardinal de Rohan or the Medici. In the case of Mr. Platt, however, it would seem that, whatever the original impulses of his clients, he has been too strong to let them spoil his own work, and as a consequence he has given us a succession of garden schemes and country house designs which reach a higher level even than any English architecture of the present day. To quote Mr. Cortessoz: "He has done more than any of his contemporaries to justify the vogue of those interiors which have come to express our cosmopolitan culture, the interiors filled with furniture and other objects rescued from Renaissance Europe and from antiquity. The patient collector is not by any means the only type to-day who 'goes in' for Elizabethan four-posters, Florentine wedding-chests, Flemish tapestries, and miscellaneous old marble and bronzes. The things enter many a house along with the new chairs and carpets, quite as a matter of course, as so many furnishings. They go in all at once, too. They are the raw material out of which the architect and client fashion an ensemble both utilitarian and decorative. It is a peculiarly modern development, interestingly allied with both the spread of education and the increase in wealth. When the historian of American manners reaches the chapter which is bound to be dedicated to the subject, he will find it a gold-mine of social psychology, and, incidentally, he will come across some delightful humours. Grubbing amongst old anecdotes he will chuckle over the quaint ways and the formidable influence of the dealers, and he will note the foibles of some architects. Here and there the fearful and wonderful achievements of the latter will explain to him how, in the course of this lavish period of ours, it was not uncommon for the cynically irreverent to describe one celebrated home or another as a repository of junk. Who has not seen the house, more like a museum, and a very poor one at that, than a home? I cannot but allude to these instances of foolish extravagance and vulgar taste, for as we turn from them to one of Platt's rooms the contrast is wonderfully illuminating. His *flair* for the right tapestry, the right old chair, or the right monumental carved mantelpiece is exactly equalled by his judgment in finding the right spots for them, and in harmonising together the few such objects which he brings into a room."

I have not had the opportunity of studying any of Mr. Platt's houses in actuality, but illustrations of them are very well known to me, and I heartily agree with the estimate of his ability which is expressed in the foregoing passage. I commend the latter, too, for its introduction of the word "junk." We are gradually becoming Americanised, and the kinematograph pictures, with their racy titles, are adding profoundly to our vocabulary. Hence, I would not leave so expressive a word as "junk" immured in the pages of an introduction. Architects will, I am sure, welcome it as meeting "a long-felt want." Undoubtedly if the Pre-Raphaelites were alive to-day they would seize upon it with avidity. It will be recollected that among that brilliant circle "stunner" was the approved term for everything that was estimable, and I claim for "junk" a similar merit, as indicating things which pedantic English can meekly describe as a spurious jumble or hotch-potch.

UBIQUE.

THE PLATES.

The Academy of Science, Athens. Theophilus Hansen, of Vienna, Architect.

THIS building, which is referred to elsewhere in the present issue, was erected at the expense of Baron Sina, of Vienna, during the third quarter of the nineteenth century. Originally it was intended to accommodate a body of Greek and foreign savants, constituted on the model of the Institut de France, but with the exception of a portion devoted to a numismatic collection, the various chambers, including a sumptuous debating-hall, are unused. The structure has a base of Piræic limestone, above which the work is executed in Pentelic marble. The façade is pricked out with colour, and is generally acknowledged as one of the few modern successes in polychromatic architecture. The height of the columns flanking the main portico is somewhat prejudicial to the value of the complete design.

Palace Interior: Escalier d'Honneur, Compiègne. Gabriel, Architect.

Compiègne Palace, exterior and interior, is one of the most stately of Gabriel's creations. It was built during the reign of Louis XV. on the site of the old residence of Charles V., and has two frontages, the first towards the Place d'Armes and the second towards the park. The interior, of which our plate illustrates the grand staircase, is sumptuously furnished with Empire furniture and tapestry. Compiègna Palace witnessed its principal glories after the Revolution, when Napoleon Bonaparte, Louis Philippe, and Napoleon III. in turn resided there.

No. 84, *Harley Street, London. Claude W. Ferrier, Architect.*

This is one of two houses in Harley Street, immediately opposite to each other, which were erected about the same time, and shows the advantages to be gained in a narrow frontage by extending the flanks of the mansard storey, and omitting the usual parapet. The width appears to be perceptibly greater, and the angle of light to the lower windows of the opposite house is considerably improved. This house, like its fellow, was planned with special regard to a medical man's requirements, and has a garage in the rear. The contractors were Messrs. Higgs and Hill, Ltd., of the Crown Works, Lambeth.

Cottingham's Designs: Bronze Stands for Gas Light.

Cottingham's exuberant wealth of imagination is sufficiently demonstrated in his designs for cast-iron, and his bronze work shows a similarly inventive interpretation of the Classic ideal. The elaborate Corinthian stand in the centre, redundant as it is in various detail, has nevertheless the unity of a well-ordered design.

Royal Cromer Golf Club-house. G. B. Carvill, Architect.

Reference will be found elsewhere to the genesis and the details of construction of Mr. Carvill's concrete building. Our plate shows the front elevation and the plan of the club-house (with the ladies' club-room).

Student's Drawing: Composition of the Ionic Order (Odéon). By M. Duval.

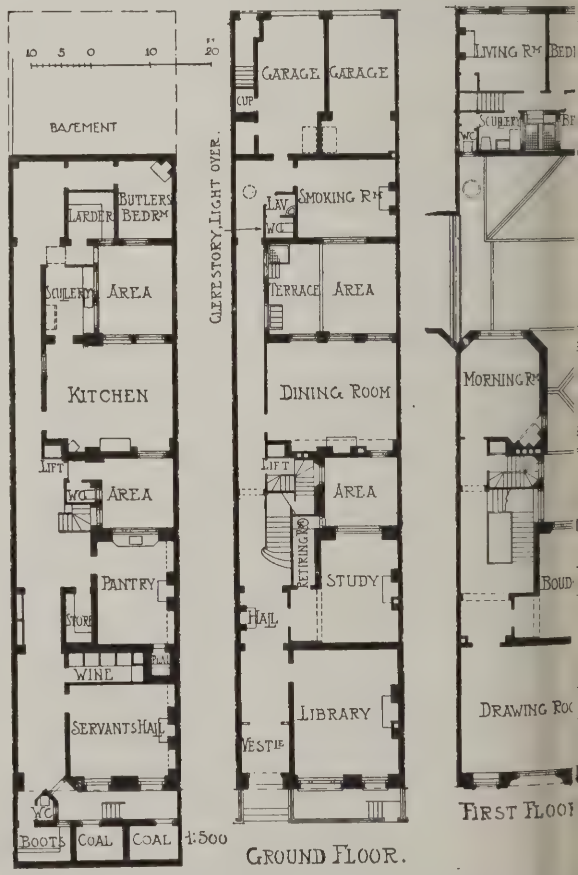
This drawing is one of a series of compositions by former students of the Beaux-Arts, which we have published from time to time.

Gilmour Hall, Students' Union, Liverpool: Half Elevations of West and East Sides. Professor C. H. Reilly, M.A., F.R.I.B.A., Architect.

We have previously published plates showing the principal elevations and interior views of Gilmour Hall, together with some description of the structure. The working drawing given as a plate will therefore be studied with interest.

THE ETCHINGS OF PIRANESI.

THE popularity of the wonderful etchings w
Piranesi made in the eighteenth centur
quite a feature of the present day. Hence
a matter of general interest to draw attention to
publication of a most attractive little volume givi
selected series of these etchings. This volume is t
published by Messrs. Technical Journals early
month at the remarkably low price of 2s. 6d., an
sure to meet with a very wide and rapid sale.
fewer than 50 plates are included in it, all reprod
in brown ink on a fine-quality paper, the whole b
bound within an attractive cover. Professor R
has written an introduction to the volume, gi
a critical estimate of Piranesi's achievements, as
as a short biography of this great artist. As
observes, it is safe to say that the new vigour and
which came into English architecture with the
of Chambers and Adam was derived from a
thorough and complete knowledge of Roman arch
ture, and that the chief source of that knowledge
the vast collection of thirteen hundred or
engraved plates which Piranesi etched and publi
at the marvellous rate of one a fortnight through
fairly long life. The unfortunate thing, howeve
that his etchings, a few years ago so easy to ob
are daily becoming more rare and expensive. A
lection of the best of those issued during the ar
lifetime could hardly be made to-day for less th
couple of hundred pounds. The Paris reprints w
his son issued in 1815 might be obtained for half
sum, but to the ordinary practitioner this may be
sidered as half infinity. Even Mr. Keith Yo
massive volume of reproductions costs several po
But to-day the process block, albeit lacking in the
vellous quality of the original etchings, has re
tionised reproduction, rendering possible the pub
tion, at small cost, of such a series as that compris
this volume.



No. 84, HARLEY STREET, LONDON. CLAUDE W. FERR
ARCHITECT.

CORRESPONDENCE.

*ditors disclaim all responsibility for the statements made or opinions
sed by correspondents, who are asked to be brief, and to write on one side
only of the paper.*

Barnsley Town Hall Competition.

he Editors of THE ARCHITECTS' AND BUILDERS
JOURNAL.

RS,—This competition has been banned by the
ety of Architects, and its members have been
ested not to take part therein owing to the unsatis-
ory nature of some of the conditions. I ask your
peration in enabling me, through the medium of
paper, to get into touch with other responsible
itects, especially those who do not belong to any
itectural body, and to invite them to act in unison
is matter. The remedy is in the hands of
idual architects, and it is in their own interests
hat of the profession of which they are members
they should refuse to have anything to do with
tectural competitions the conditions of which are
n accordance with certain recognised principles.
is not so much a question of membership in any
tectural body as of membership in the profession.
object of promoters of architectural competitions
mably is to obtain the best professional services,
t is time that architects, as well as architectural
ies, should use every effort to convince promoters
competition regulations which do not embody the
tial requirements of the profession cannot be
ted to achieve their object, and also that there is
a thing as professional etiquette in the architec-
profession.

C. MCARTHUR BUTLER, Secretary.
ciety of Architects, 28, Bedford Square, W.C.

R.I.B.A. Testimonies of Study.

e Editors of THE ARCHITECTS' AND BUILDERS'
JOURNAL.

S,—I should very much like to draw attention to
ck of particulars for the various testimonies of
for the Final Examination of the R.I.B.A.

example, we are asked to design council offices
t £15,000, without any details of site, of avail-
naterials or of requirements; we are not even
the population of the town.

are of course expected to "crib" it from some
ng example that has been illustrated, but, then,
an hardly call that design; surely we must have
hing to evolve a design from.

ne of the other subjects are equally ridiculous,
s the Museum.

architect has a client to deal with, so why should
lent not have proper particulars given him in
of a client? Instead of that he has to create a
ter to take the place of a client, thus becoming a
a novelist and also a bit of an architect.

are always being told that necessity is the
r of invention and that architecture is a practical
d one would think, therefore, it is time we
wledged these facts by putting them into
e.

STUDENT.

Daylight Illumination of Schools.

Editors of THE ARCHITECTS' AND BUILDERS'
JOURNAL.

,—Referring to Mr. Robson's letter in your issue
ruary 11th, in which he suggests that the author
paper referred to denied the existence of rules
ool windows, I have re-read the report and
d no justification for such a view. In fact, the
own Regulations of the Board of Education
cussed in the paper. There is no lack of
ral rules for the windows of new classrooms,
ere and abroad, nor is there any lack of interest-
iety between the views of different authorities.
ifficulty of the architect is to know to what extent such rules apply opposite various degrees of obstruction, to what extent they can be applied to condemn existing schools, and what, in fact, is the proper standard of daylight illumination in schools and the relative values of the factors which produce it.

A welcome opinion from such an eminent authority as Mr. Robson is that questions of bilateral lighting demand, like all other real or suspected defects in natural lighting, practical systematic investigation. No individual investigator can hope to acquire the necessary medical and other data. The study of well-lit rooms helps us but little. What we need would appear to be a small travelling commission, medical, scientific, and structural, to visit school places which have been adversely criticised by school medical officers, and to investigate on the spot the conditions which have given rise to the physiological evils disclosed in the medical officer's report.

Few matters can be more vitally important to our national well-being than the conditions under which young children compulsorily tax their eyes with reading and writing in early years. Fortunately it is generally possible, by selecting a suitable hour, to study even on summer evenings the equivalent of winter days, and there is no need to relegate the study of this vitally important question to the crowded and busy winter months.

J.

Hoop Iron in Footings.

To the Editors of THE ARCHITECTS' AND BUILDERS
JOURNAL.

SIRS,—*Re* your correspondent's letter on hoop iron in footings, if hoop iron is properly tarred and sanded before being placed in position, I see no reason why it should perish because of age.

I have seen hoop iron cut out of footings that have been in for scores of years, and it was almost as strong as new. Probably the hoop iron in question was used, as it is often done, without any covering whatever to prevent its rusting and therefore perishing.

W. ALFLATT.

Model Answers to Examination Questions.

Last week we published a letter signed "Articles," in which the writer expressed the opinion that it would be a great blessing to the large number of young men who are at present articled to architects if the questions set at the R.I.B.A. (and perhaps the M.S.A.) examinations were regularly printed in this journal, together with model answers, with, of course, illustrations. We invited the opinions of other readers as to the desirability of making this a feature, with the result that a large number of letters from different parts of the country have reached us in support of the proposal. We are much obliged to the writers of these letters, and are carefully considering the desirability of complying with their wishes.—EDS. A. AND B.J.

ST. MICHAEL'S, CORNHILL.

SOME interesting restorations are being carried out in the Rectory House of this historic City church and in the church itself by Mr. Charles Reilly, F.R.I.B.A. The Rectory House was built shortly after the Great Fire of London, and includes, on the ground floor, communicating with the church, a remarkable Vestry Room, having its walls lined throughout with Jacobean oak wainscoting, which, however, has long been covered up with innumerable coats of paint. This is to be removed, and the whole panelling, as far as possible, restored to its pristine condition. The church itself is to be provided with a new oak floor. A new system of ventilation is also to be installed here, with an air-extracting fan, the inlet of fresh air being assured by electric heaters. There will be a new heating apparatus and other improvements. The church is one of Wren's, and the exterior has retained its original form, but the interior was greatly altered by Sir Gilbert Scott.

EXHIBITION OF PRIX DE ROME DRAWINGS, CANADA GALLERY, IMPERIAL INSTITUTE.

BY A. E. RICHARDSON, F.R.I.B.A.

The growing interest in architectural education is evidenced by the number of the public who visited the exhibition of student works entered for the Prix de Rome final competition. Architecture rightly occupies the place of honour in the room, the sculpture and painting exhibits falling far below the standard achieved in the premier subject.

In criticising the collective value of the architectural designs, or deducing the attributes which rank above the discussion of minor points, two facts arrest attention. The first relates to the superior planning of those students who can claim to have come within the influence of a Parisian training in this regard. The second is the undoubted excellence of the elevational treatments attained by English-trained students. This is a fact which far outweighs mere Parisian smartness in presenting a scheme which sparkles in a horizontal plane, but which refuses to grow satisfactorily in a vertical direction. The student who enjoys the advantage of a French training, approaches his subject with an open and elastic mind; the plan is his one theme; the elevation is only brought to the surface when the plan assumes the right pattern. Except in the hands of an expert, this procedure is open to a grave danger, the interest given to the plan representation often resulting in a second-rate and ordinary composition vertically.

Contrast the work of the foregoing with the work of an English-trained student, for the sake of argument one who has an acquaintance with French methods. He obeys the rules of balance, axiality, and logical arrangement, but his preconceived ideas of how the subject should be interpreted cramp his movements and prevent that imaginative grasp of the situation which is always within reach of the designer who keeps his design flowing. Curiously enough, the stiff handling of the plan acts beneficially in regard to the elevation, and almost invariably fine reticent vertical compositions are obtained. To make my meaning clearer, I propose briefly to analyse the designs and name as far as I can the training of each student.

No. 2, Thomas Braddock: His design is too massy, his plan far too complex; it is evident that he has been tempted to follow the provincial character of the English vernacular.

No. 3, Walter Keesey, has evolved a quiet, dignified design in the English manner, but has spoiled his rendering of the subject by clashy colouring.

No. 4, P. Dalton Hepworth, is at present studying at the Ecole des Beaux Arts. This plan reveals a magnificent grasp of the problem; it is open, full of suggestive and commanding effects, but the elevations follow the usual Parisian recipe of three masses and interesting roofs. They are far from convincing.

No. 5, Bernard Alexander Miller, hails from the Liverpool School of Architecture. His plan is well schemed and the divisions are thoughtfully placed, but the circulation is not open enough. The enjoyment of such a building would be marred by the cellular treatment. The elevations are depressing by reason of the gigantic entablature which crushes the portico. Otherwise he has a taste for refined composition and detail.

No. 9, Ernest Cormier, from Paris, submits a plan frankly and honestly of that smart Parisian type which captivates the professor enamoured of circulation. It is a fine, open plan, but the elevations fall below the average and the colouring is very flashy. The much-vaunted French academic training which rules out the reverential study of the orders is surely decadent.

10, Fred Jenkins, from the Liverpool School of Architecture, submits a particularly charming and academic scheme; the elevational treatment is, barring minor points, highly original, and the presentation of the drawings is unquestionably refined and broad.

11, G. R. F. Cole, from the Liverpool School of Architecture, has a good plan, but the staircase is badly placed; the elevation is by far the best in the room and an object lesson in good taste without losing a fraction of monumental effect. The slick pencil perspective, which is so straightforward as to appear effortless, is reminiscent of those perspectives which Elmes delighted in.

15, D. St. Clair Macphail, of Edinburgh, submits a scheme which I cannot admire.

In conclusion, I boldly reiterate my opinion that the French plans are the best and the English elevations the most forceful.

Sculpture.

The sculptural competition produced many works of varying interest, the following students being entered for the final competition:

1, Frederick John Wilcoxson.
3, William Henry Wright.
6, Charles Sergeant Jagger.
7, Benjamin Hancocks.

Painting.

This competition shows the prevalent tendency to further the cult of the ugly. Hideous portraits, nude studies devoid of grace, anatomical daubs with minute detail, inane pictures of the commonplace. There were exceptions to the above, particularly a charming sketch of a figure with filmy drapery.

The following students are entered for the final competition:

18, S. Woods Hill (who embodied architectural studies).
10, Gladys Dorothy Dawson.
26, Thomas Corrie Derrick.
27, John Miles Bourne Benson.

ARCHITECTURAL ASSOCIATION OF IRELAND.

An ordinary meeting of the above society was held on Thursday, February 5, Mr. W. M. Paton, A.R.I.B.A., occupying the chair in the absence of the president. Mr. Thomas Tomlinson, B.E., read a paper on "Electric Lighting for Architects," the subject of which mainly treated of installations for private houses. The lecturer described the various tests for good work and illustrated his remarks by exhibiting samples of cables, flexible switches, and other electrical requirements. The paper was very practical in character and was much appreciated by the numerous practising architects present.

Mr. T. E. Hindman proposed, and Mr. G. L. O'Connor seconded, a vote of thanks to Mr. Tomlinson, which was passed with acclamation.

An exhibition of students' work was held in the Architectural Association Hall, 15, South Frederick Lane, from February 9 to February 25.

THOMAS ROWLANDSON.

Lecturing before the Architectural A ciation on February 16 last, Mr. Sel Image began by saying that Rowland if not a star of the first magnitude in firmament of art, was to him, neverthe a brilliant star. He went on to q from Matthew Arnold's Essay on Jou to support his contention that there real profit as well as much delight studying from time to time the lesser as well as the greater. The profit c came from a certain peculiar feelin intimacy in the acquaintanceship. he was not asking their attention to landson simply because that artist's was very dear to him. It was becaus his particular way, Rowlandson wa characteristic English artist, and an of singular genius.

There was, he said, nothing tragi moving about Rowlandson's life. The pathetic thing he knew about him wa infinitely sad squandering of his ge Born in 1756, the boy soon showed of his artistic bent, and in due co entered as a student at the Royal Acad He advanced quickly in spite of an in rate frolicsomeness—one of his game surreptitiously to play on the unl model with a pea-shooter—and was po with fellow-students and academic From the Academy, through the offices of a rich uncle, he went to returning again to the Academy afte years' study. Here, then, were two p to be noted. There was no doubt th was a thoroughly trained artist; he w hard as a student and learned his bus

The second point was that coming early an age as he did under the fas tion of Parisian life, his pleasure-l nature was only too early seduced b witchery of that gay capital from all tion to serious art into following wha merely easy and frivolous. He was frivolous and sometimes much more frivolous. But in his heart there good deal else besides frivolity and gerated caricature. In the immense of work he left there were quite inn able drawings so full of beauty, of h sympathy, of evident delight in the of country life and country scenes, o vision of the actual world about h vision, it might be largely—though means invariably—humorous, mos tainly not always coarse, but strangely tender. Would the world been the gainer if he had turned his on this art to paint pictures in the s grand manner?

Essentially and by predestination landson's genius was for what in l vivacious and charming, not for w pathetic and profound. In 1775 he bited his first picture at the Academ two years later set up a studio in W Street, Soho, where he practised p painting for a year or two without s and then followed the line of least ance in drawings and caricatures. were one or two special excellencies tues in his art. The first excellence was his mastery of design. He was neglectful of it even in the most ca the most blatantly comic and coarse drawings. Every picture in its mental structure was an arrangem lines and masses, generally of lin masses within the limitation of the and size of the canvas or paper sett If the design was good, these lin masses stood in such disciplined rela one another that each one produ calculated effect in its precise positi

not be altered without loss, while all
·m together produced an harmonious
, leaving the satisfied sense that
was wanted neither less nor more.
·lement of design was paramount in
finest art, and art always was fine
ich it was present.

lecturer then demonstrated, by
ng two of Rowlandson's drawings on
reen, the application of his definition
ign to the artist's work.

urther point about Rowlandson was
is drawing was always alive.

lecturer then showed on the screen
ndson's "The Road to the Derby,"
Miseries of London Life," "Oxford
's," and others illustrative of the vita-
his draughtsmanship and his treat-
of pure landscape.

is best drawings his colour was en-
on the side of delicacy, transparency,
ness, opalescence. There were
mechanical drawings, but they were
irly representative of him. If his
gs were faint in actual pigment and
they were potent in their general
Lastly, there was Rowlandson's
dainty sense of youthful grace and
, especially of female beauty at its
peness. During the last few years
had sprung up a revived interest in
ndson—a sort of Rowlandson cult,
he hoped meant a discriminating
iation of his genius. But of this he
t quite sure. He hoped, in conclu-
that, whether he had carried his
ce with him or not, they would no
think of Rowlandson—as for many
and so widely he had been thought
rely as a coarse, rollicking carica-

te of thanks to Professor Image was
ed by Sir Charles Holroyd and
ed by Mr. Arthur Keen.

ITION OF BRITISH ARCHITEC-TURE, PARIS, MAY, 1914.

int committee of members of the
A. and of the Architectural Associa-
s been framed to get together a col-
of drawings, etc., representative of
architecture, together with
s' drawings, for exhibition in Paris
n the month of May next. The
l to hold the exhibition emanates
e Société des Architectes Diplômés,
, to whose good offices, it will be re-
red, the profession in England
debted for the most interesting ex-
of drawings by students of the
les Beaux-Arts held by the Archi-
Association at the Tufton Street
es last year. The exhibition now
eld in Paris was originally intended
composed mainly of English
s' drawings, but it was ultimately
l to include a representative col-
of British Architectural work, and
reason the Société des Architectes
és have invited the co-operation of
.B.A.

exhibition will comprise three main
: (1) Historical, (2) Modern work,
dents' work. Scottish and Irish
will be grouped separately to
eir historical and modern develop-
Modern work of a representative
er will be shown, limited to build-
tually carried out. It is under-
hat the exhibition will be officially
by the President of the French Re-
The Chairman of the Joint Com-
s Mr. Reginald Blomfield, R.A.,
nt R.I.B.A., and the Hon. Secre-
. P. Cart de Lafontaine.

"REASON OR FASHION IN ARCHITECTURAL DESIGN."

This formed the subject of a notable address by Mr. Hugh P. G. Maule, late headmaster of the London School of Architecture, at a meeting of the Birmingham Architectural Association, held in Exchange Buildings on Friday week. The President (Mr. G. Salway Nicol) was in the chair.

At the outset Mr. Maule remarked that it was his desire to stimulate thought upon the tendencies and direction of modern architectural design, even though he might fail to put forward any new or original ideas.

If architecture (proceeded Mr. Maule) was primarily the structural art of building made beautiful, and not merely the decoration or outward dress of structural building forms, then both internal structure and external presentment, whether within or without the building, were the province of the architect and must conform to the rules which seemed to govern all man's inventions and activities. Further, they might almost say that the closer the affinity between the actual structure and its æsthetic presentment, the more nearly the two were one and indivisible, the more completely did the whole structure compel their admiration and fulfil their definition of architecture. The comparative failure of the Arts in the past century could not be ascribed to loss of daring or imaginative power in the civilised nations of the world to-day, but rather to the thraldom with which they had clung to past forms as a means of expression, whereby the life-giving elements of new needs and structural units had been shorn of all potential force. If they turned to the teaching of history, did they not find almost invariably that the life-giving element in all great building areas had been the creation and development of some structural unit, until organic structure and its adornment became the perfect architectural conception? It could be shown that all structural processes applied over any given period to any particular object followed an evolutionary course. Efficiency and perfection were but slowly evolved. But in every evolution new processes had had to find fitting expression, and though at the dawn of a new development the external expression might, and invariably did, follow previous forms, yet eventually the perfect expression was only found by complete unity between purpose, structure, and materials. In architectural history there was perhaps no more striking testimony to the clearness of Greek vision than the way the Greek mind stripped Imperial Roman architecture of its incongruous, borrowed Greek dress, imposed upon the Roman structural units of brick, reinforced concrete arch, vault and dome, and, given the unique opportunity, produced from these units of construction the wonderful harmony of Santa Sophia. He doubted if architects had even yet really applied the wonderful example of Greek logic or realised its true significance. If the Greek mind of the Sixth Century A.D. could fashion Santa Sophia from the sheer engineer construction of the Roman, overlaid as it was with constructed decorative forms, surely they moderns might take heart of grace and believe that if they, too, turned their minds to the fundamentals of their art, they might once more wring from the present incoherences some unity of conception to the greater buildings and modern constructions for whose creation they were supposed to be responsible. Was it not a fact that they had suffered, and were suffering, from the artificial barriers they had created between construction and what they were pleased to term design? Just as the Greeks knew no word for art, so should architects know no distinction between structure and design. The two were, or should be, synonymous, and architecture was rightly the measure of unity, beauty, and grace they attained between structure and its expression in terms of building.

Mr. March Phillips, in his thoughtful and fascinating book "The Works of Man," showed that modern architecture is and must be intellectual. Eclectic it might be, if only for the reason of its modern diversity, but at least it might express in some measure the higher reasoning faculties and more critical sense to which civilised nations had now attained, and not merely their tabulated knowledge. It might be that much of our modern architecture reflected only too faithfully the fact that, while they had trained their eyes to see, they were in too much haste to think, and that the stress and struggle of existence precluded at present that realisation of unity between structure and expression which must, he believed, demark all great building art. It might be that, like the designers of the warships of the 'eighties, they were still struggling between a new structural evolution and the outward expression of an old one. This he believed to be the case, and that they would eventually apply their reasoning faculties and attain to a clearer vision of the forces they were seeking to control. If they continued to divorce structure from its expression they would gradually renounce all claim to being architects, and must content themselves with the ambiguous title of "Engineers' Decorators." In America the problem appeared to be reaching some solution by the collaboration of architect and engineer, and while this might be necessary for the exceptional buildings evolved through the particular circumstances of site conditions in New York, it would not appear to be necessary in this country. The Renaissance architects, Wren in particular, would have scorned the idea that any part of their buildings should be the product of other minds; and after some considerable experience in watching the growth of young architects in the making he failed to see why training in structure and design should not be synonymous. The application of reason must eventually concede that the practice of a structural art must be based on structure and an intimate knowledge of the æsthetic and mechanical properties of materials composing that structure, and the expression would grow out of the skill and taste with which the problems of plan and structure were combined, rather than in the mechanical acceptance of a pre-determined external presentment couched in the form of some selected period or style. Reason, too, must also eventually concede that such phrases as symmetry, proportion, balance of parts, "the Grand Manner," and the like did not necessarily imply that any particular period or style must be selected in order to give them expression, but rather that all great architecture must conform to certain definite laws of order and arrangement, and that architecture, being man's highest concrete presentment of objective form, must convey in no obscure terms the inner significance of his national mentality.

LONDON MASTER BUILDERS' ASSOCIATION DINNER.

The forty-second annual dinner of the above Association was held on Wednesday, February 18, in the Whitehall Rooms, Hotel Metropole, when the chair was occupied by the President, Mr. Walter Lawrence, jun. The attendance, which numbered considerably over 200, included Sir H. H. Bartlett, Messrs. Basil E. Peto, M.P., William Woodward, Ernest C. Holloway, Henry Holloway, J. S. Gibson, James Carmichael, E. Guy Dawber, Ernest J. Brown, Stephen Bird, H. P. Burke-Downing, Ralph J. Holliday, H. P. Shepherd, James S. Holliday, Percy B. Tubbs, Frederick Higgs, E. B. Barnard, B. I. Greenwood, W. Curtis Green, William Shepherd, T. J. Carless, F. Shingleton, S. J. Dicksee, Theodore Godlee, F. Millar, A. W. Turnbull, G. H. Parker, F. J. Walton, W. Downs, W. F. Wallis, G. Bird Godson, W. Hammond, W. J. Renshaw, A. W. S. Cross, Ben Carter, Victor Wilkins, and S. B. Depree. The customary loyal toasts having been honoured.

Sir H. H. Bartlett, Bart., proposing the toast of "The Houses of Parliament," asked: What had Parliament done for them as builders and contractors? For one thing, that assembly had laid on them, with one or two other trades, the burden of unemployment. If the experiment proved to be successful it would be applied to other trades; if it did not succeed it would be dropped, and the builders would have had to put up with three years of taxation to provide an experiment for the House of Commons. He thought they as builders would be grateful to the House of Commons if they would only do away with or amend the Trades Disputes Act—one of the most iniquitous Acts of Parliament ever passed.

Mr. Basil E. Peto, M.P., in reply, referred to the phenomenal diminution within recent years in the supply of houses of an annual value below £20. Mr. Lloyd George explained it by saying that the price of materials was high and money dear, but it should be remembered that the high prices of building materials had not subsisted over the whole period, but were confined to the last two or three years. To remedy the deficiency it was now proposed to provide 120,000 small houses by the direct intervention of the State. Mr. Peto went on to emphasise the injustice of this action, pointing out that as the State could command money at a much cheaper rate than the individual, no chance was left for private enterprise. The Chancellor of the Exchequer, in referring to the fact that money and building materials were dear, never mentioned that building labour was dearer and dearer. He did not mean that in connection with the various trades affected the hourly rate of wages had been advanced from time to time. This, if builders had an adequate return, no one would grumble at, but he did complain that there was a smaller and smaller return in labour for the money expended. People engaged in every class of building were finding out that it cost them more and more year by year to carry out the same amount of work that they carried out heretofore. The price of materials went up and down, money was dear and cheap, but labour was becoming less and less efficient, dearer and dearer year by year, by reason of the vicious system which was corrupting the whole labouring classes of this country, who were led to believe that the interests of capital and labour were opposed. Until they could do something to alter this fundamental error, until capital and labour could co-operate in a common cause, they would find strikes occurring again and again.

Mr. Henry Holloway, proposing the toast of "The Architects and Surveyors," congratulated the President on the magnificent assembly at the dinner. He thought it was worthy of him, for those of them who had had the good fortune to work with their President during his year of office felt that they could not do too much to honour him for the great services he had rendered to the building trade. Having pleaded for a more intimate association between architect and builder, Mr. Holloway turned to the struggle through which the London builders were passing. It was not, he said, merely a question whether they were going to allow a man to work on their job, trade unionist or not. The fact of the matter was the Socialists and Syndicalists were determined, if possible, to control all the industrial enterprises of this country. That was a dangerous principle. The Syndicalists were out to destroy the power of capital to control enterprise. The point particularly before them at the present time was a proposition that every employer should sign an agreement to the effect that no man should work on his job unless he was a member of a trade union. The second step would be that the unions would ask to be allowed to regulate the engaging and dismissing of the men, and in the end they would be asked to give up absolute control of their business. The Syndicalists claimed to be allowed to regulate the output of the men engaged. It behoved them to look at this question seriously, and to stand firm in resistance.

Mr. J. S. Gibson replied for the architects, and, in the course of an interesting speech, protested against the setting up all over the country of a standardised cottage.

Mr. T. J. Carless replied for the surveyors.

Mr. William Woodward, proposing the toast of "The London Master Builders' Association," said that architects were closely concerned with the present dispute. If a conference between the two parties were wished for the R.I.B.A. would be very pleased to do what they could to put an end to the trouble. It was impossible, however, to arrive at a solution of the difficulty unless they got rid of what were termed the labour leaders. He believed that not 50 per cent. of the men were now on strike from their own free will. They did not know why they were striking; they did not wish to strike, and would be the very first to resume work if allowed to do so. He hoped the day would come when the labour leaders would be treated in precisely the same manner in which they had been treated in South Africa.

Mr. Walter Lawrence, in reply, referred to the concession of a penny per hour made to the painters by the London Master Decorators. This concession, though not favoured by the L.M.B.A., had been adopted as a standard by the L.C.C. and applied to the builders. He protested against this action, more particularly as the London Master Decorators did no work for the L.C.C. During the course of the year, he continued, they had held 121 meetings, as against 53 in the preceding year and 38 in the year before that. Their labours were going up by leaps and bounds. With regard to the present dispute, he would say nothing to aggravate
the position, as they were on the poir
conference with the men. He emph
the fact that it was never the intent
the Association that the twenty-sh
penalty agreement should form the
of negotiations with the men. If
were willing to put forward some r
able guarantee that would be bi
upon them with regard to future con
it might lead to a speedy settlement
also assured the men that there wo
no reduction in wages paid as a re
recent agreements.

Mr. W. F. Wallis proposed the t
"The Visitors," to which Mr. E. B
nard, chairman of the Metropolitan
Board, replied.

NEWS ITEMS.

Appointment for Newcastle Archi

Mr. Forrest, who for several yea
held the post of architect to the
umberland Education Committee, ha
appointed to a similar position un
Essex County Council.

Town-planning, Rochdale.

The initial steps for laying out a
of land on town-planning lines are
taken, and it has been decided to
mend the Town Council to apply
Local Government Board for power
pare a scheme.

Estimated Cost of the New De

At a recent meeting of the Cou
Delhi, presided over by the Vicer
R. W. Carlyle said, in answer to
tion, that the Government were un
get an estimate of the probable
the new Delhi. This answer was
with disappointment, as the latest
estimate amounts to £7,000,000.

New Partnership.

Mr. Rowland Plumbe has tak
partnership Mr. J. C. S. Mumme
Mr. Charles Fleming-Williams, wh
been associated with him in his prac
many years. The practice will
tinued as heretofore at 13, Fitzroy
London, W., under the style of R
Plumbe and partners.

Dissolution of Partnership.

It is formally announced th
partnership of Honeyman, Kep
Mackintosh, architects in Glasgo
dissolved as on January 1st, 1
mutual consent. Mr. John Kep
continue business under the n
Honeyman and Keppie at 257
George Street, Glasgow, and Mr.
Rennie Mackintosh will carry on
in his own name at 78, Ann Stre
head, Glasgow.

Changes of Address.

Mr. Herbert Norman, Li
R.I.B.A., has removed to 50, St
Street, Northampton.

Mr. R. C. Coulson, architect,
moved to 7, Southampton Street,
bury Square, W.C. Telephone,
4799.

Messrs. Alfred Swash and Son
tects and surveyors, Newport an
drindod Wells, would be glad if co
dents would in future send com
tions intended for Llandrindod
their head office at Midland Bank
bers, Newport, Mon.

CONCRETE AND STEEL SECTION.

(MONTHLY.)

EL JOISTS IN CONCRETE.

BY "SEEKER."

il the recent appearance of the able handbook of Messrs. Redpath, & Co., there has, to the writer's edge, been published no attempt at a formula for the strength of joists lded in concrete. Unfortunately, no is given for the formula published above handbook, which seems to esults much higher than those de- from the following usual conditions sumptions for 1 : 2 : 4 good concrete ly laid.

he tensile strength of concrete is ted.

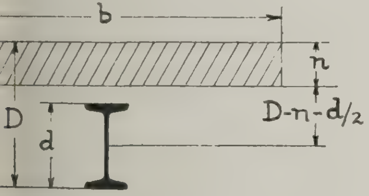
he compressive stress in concrete ted to 600 lb. a square inch.

he stress set up in concrete is of that set up in steel in contact it; in other words, the modular .e., the ratio of the elastic modulus l to that of concrete, is 15.

plane cross-section before bending as plane when bending; in other the strain curve is a straight line.

ook's law holds good in the stress under consideration — in other the stress curve is a straight line.

sider a joist of depth d, area A, nt of inertia I, embedded in con- of depth D, and width b, all dimen- n inches.



neutral axis is the centre of gravity area of the combined steel and con- with the condition that the steel worth 15 times an equal area of te.

is the distance of the neutral axis e top of the beam

$$b \times \frac{n}{2} = 15\,A\left(D - n - \frac{d}{2}\right) =$$

$$15\,r\,b\,D\left(D - n - \frac{d}{2}\right)$$

$\frac{A}{b\,D}$ the ratio of area of steel to concrete.

$$+ n \times 2 \times 15\,r\,D = (2\,D - d)\,15\,r\,D$$

$$15\,r\,D + \sqrt{15\,r\,D\,(2D - d + 15\,r\,D)}$$

$$5\,\frac{A}{b} + \sqrt{15\,\frac{A}{b}\left(2\,D - d + \frac{15\,A}{b}\right)}$$

moment of inertia of the whole about the vertical axis =

$$+ 15\left\{A\left(D - n - \frac{d}{2}\right)^2 + I\right\}$$

section modulus $= \frac{b\,n^2}{3} + \frac{15}{n}$

$$\left\{A\left(D - n - \frac{d}{2}\right)^2 + I\right\}$$

The resistance moment at $\frac{600}{2240}$ tons per sq. inch $= \frac{600}{2240} \times \frac{bn^2}{3} + \frac{15 \times 600}{2240\,n}$

$$\left\{A\left(D - n - \frac{d}{2}\right)^2 + I\right\} \text{ inch tons.}$$

This value per foot width =

$$\frac{12 \times 600}{2240 \times 3} \times n^2 + \frac{12 \times 15 \times 600}{2240 \times n \times b}$$

$$\left\{A\left(D - n - \frac{d}{2}\right)^2 + I\right\} \text{ inch tons.}$$

$$= 1{\cdot}071 \times n^2 + \frac{12{\cdot}05}{n\,b}\left\{A\,(2\,D - d - 2\,n)^2 + 4\,I\right\} \text{ inch tons.}$$

Having selected convenient values for b, the determination of n by means of the slide rule from the formula

$$n = -\frac{15\,A}{b} + \sqrt{\frac{15\,A}{b}\left(2\,D - d + \frac{15\,A}{b}\right)}$$

is very simple.

When the neutral axis comes within the depth of the joist, the displacement of the compression area of concrete by the steel may be neglected.

The resistance moment per foot width can be calculated for the selected values of b and the curves plotted.

The concrete between the joists may be considered as acting as a beam of length b.

If w is the total load in cwt. per ft. super, the load on one ft. width $= \frac{w\,b \times 112}{12}$ lb., and the bending moment $= \frac{w\,b^2 \times 112}{96}$ inch lb.

The modulus of the section $= \frac{12\,D^2}{6} = 2\,D^2$ inch³ and the tensile stress $= \frac{w\,b^2 \times 112}{2 \times 96\,D^2}$ which should not exceed 30 lb. in 1 : 2 : 4 concrete,

$\therefore$ b should not be greater than $\frac{7{\cdot}2\,D}{W}$ though arch action would probably prevent failure, even if the tensile strength of the concrete were exceeded. If this limit is imposed on the spacing of the joists, it seems fair to regard the whole of the concrete as acting with the joists, though perhaps advisable to limit the effective width to say 4 D, in which case the curve for spacings greater than this figure is a hyperbola, as is the curve for the joists alone.

When b is small the value calculated as above may be less than that of the joist alone stressed to 7½ tons, e.g., a 7″ × 4″ joist at 20″ centres D = 8, b = 20, d = 7, A = 4·706, I = 39·21 Section modulus = 11·2, i.e., resistance moment per foot width alone $= \frac{11{\cdot}2 \times 7{\cdot}5}{20/12}$ = 50·4 inch tons.

$$15\,r\,D = \frac{15 \times 4{\cdot}706}{20} = 3{\cdot}53,\ 2\,D - d = 9$$

$$n = \sqrt{3{\cdot}53 \times 12{\cdot}53} - 3{\cdot}53 = 6{\cdot}65 - 3{\cdot}53 = 3{\cdot}12''$$

$$2\,n = 6{\cdot}24,\ 2\,D - d - 2\,n = 2{\cdot}76,$$

$$A \times 2{\cdot}76^2 = 35{\cdot}84,\ 4\,I = 156{\cdot}84$$

$$35{\cdot}84 + 156{\cdot}84 = 192{\cdot}7,\ \frac{192{\cdot}7 \times 12{\cdot}05}{n \times b} = 37{\cdot}2$$

$$1{\cdot}071\,n^2 = 10{\cdot}4,\ 37{\cdot}2 + 10{\cdot}4 = 47{\cdot}6 \text{ inch tons.}$$

In such a case the concrete must not be relied on for reinforcing the joist, as it will be stressed beyond the allowed limit. This extra stress will never be enough to damage the concrete or impair its strength in the other direction.

When b is large, the steel may be stressed to 7½ tons, and the concrete not up to 600 lbs.

Each material will be stressed to its allowable maximum when

$$\frac{D - n}{n} = \frac{7\frac{1}{2}}{600} \times \frac{2240}{15} = 1{\cdot}8\dot{6}$$

and the result obtained from the formula, for values of b greater than that for the critical value, must be multiplied by

$$\frac{n}{D - n} \times 1{\cdot}8\dot{6}$$

A 6″ × 3″ joist with D = 8 and b = 36 curiously has a less value than a 5″ × 3″ joist at the same centres and with same concrete depth.

The 6″ joist has A = 3·53, I = 20·21, 2 D − d = 10,

$$\frac{15 \times 3{\cdot}53}{36} = 1{\cdot}47\ n = \sqrt{1{\cdot}47 \times 11{\cdot}47} - 1{\cdot}47 = 4{\cdot}11 - 1{\cdot}47 = 2{\cdot}64$$

$$2\,n = 5{\cdot}28,\ 10 - 2\,M = 4{\cdot}72,\ A \times 4{\cdot}72^2 = 78{\cdot}6$$

$$4\,I = 80{\cdot}84,\ 78{\cdot}6 + 80{\cdot}84 = 159{\cdot}44$$

$$159{\cdot}44 \times \frac{12{\cdot}05}{n \times b} = 20{\cdot}2,\ 1{\cdot}071\,n^2 = 7{\cdot}46,$$

$$20{\cdot}2 + 7{\cdot}46 = 27{\cdot}7$$

$$27{\cdot}7 \times \frac{2{\cdot}64}{5{\cdot}46} \times 1{\cdot}8\dot{6} = 25 \text{ inch tons.}$$

The 5″ joist has A = 3·235, I = 13·61, 2 D − d = 11.

$$\frac{15 \times 3{\cdot}235}{36} = 1{\cdot}35,\ M = \sqrt{1{\cdot}35 \times 12{\cdot}35} - 1{\cdot}35 = 4{\cdot}08 - 1{\cdot}35 = 2{\cdot}73$$

$$2\,n = 5{\cdot}46,\ 11 - 2\,n = 5{\cdot}54,\ A \times 5{\cdot}54^2 = 99{\cdot}3$$

$$4\,I = 54{\cdot}44,\ 99{\cdot}3 + 54{\cdot}4 = 153{\cdot}7$$

$$153{\cdot}7 \times \frac{12{\cdot}05}{n \times b} = 18{\cdot}84,\ 1{\cdot}071\,n^2 = 7{\cdot}98$$

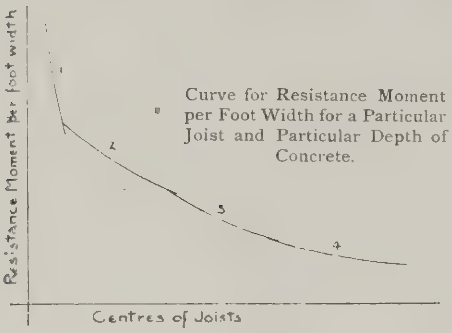
$$18{\cdot}84 + 7{\cdot}98 = 26{\cdot}82$$

$$26{\cdot}82 \times \frac{2{\cdot}74}{5{\cdot}26} \times 1{\cdot}8\dot{6} = 26{\cdot}1$$

This example illustrates the importance of position, and makes it clear that joists are not an ideal reinforcement.

Joists, however, can be most usefully employed when the depth of floor is limited and the load is so heavy that the percentage of reinforcement for ordinary reinforced concrete is prohibitive. In this case, the concrete must be regarded as acting merely as a filling, strengthening the joist only by providing useful lateral stiffening, the common practice of stressing the joists to 9 or 10 tons to allow for the reinforcing effect of the concrete receiving no support from theory unless the working stress in the concrete is taken as much higher than good practice generally allows.

The complete curve for the resistance moment per foot width for a particular joist and particular depth of concrete—plotted as vertical ordinates to the centres of the joists as horizontal co-ordinates will in general be in four parts as indicated in the figure :—



Curve for Resistance Moment per Foot Width for a Particular Joist and Particular Depth of Concrete.

1. When the spacing is small a hyperbola for the resistance moment of the joist above stressed to $7\frac{1}{2}$ tons a square inch.

2. As the spacing increases—the curve calculated as indicated above for the combined steel and concrete with the concrete stressed to 600 lb. a square inch.

3. The same curve as 2 with the vertical ordinates reduced in the ratio $\frac{n}{D\,n} \times 1.86$ for the steel stressed to $7\frac{1}{2}$ tons per sq. inch.

4. When the spacing is large and the width of concrete acting with the joist arbitrarily limited, another hyperbola, not greatly differing from curve 3, which curve will sometimes not appear as for the arbitrary maximum width, the steel of the composite girder may not be stressed up to $7\frac{1}{2}$ tons per sq. inch.

In plotting the curves it is well to remember that as in most structural work the assumptions do not merit greater accuracy than the slide rule will give, the question of adhesion of the reinforcing joists to the concrete so that they will act as one requires experimental investigation. The artificial bond given by holes in the web would undoubtedly guard against slipping, but it is doubtful whether the results would repay the labour involved.

THE CONCRETE INSTITUTE.

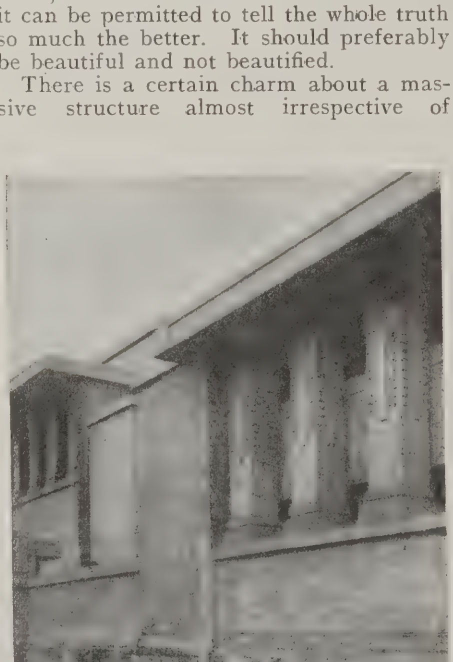
The forty-fifth ordinary general meeting will be held at Denison House, 296, Vauxhall Bridge Road, Westminster, S.W. (close to Victoria Station), on Thursday, February 26, 1914, at 7.30 p.m., when a paper will be read by Mr. W. Cyril Cocking, M.C.I., entitled "Calculations and Details of Steel-frame Buildings from the Draughtsman's Standpoint," of which the following is a synopsis: Preliminary information required for preparing schemes and estimates, etc., ideal conditions of contract, etc., eccentric loading, pillar end fixing, effect of end fixing upon eccentric loading, eccentric arm, beam calculations, weights of beams, pillars and casings, pillar calculations, deflection, shear, I-beams in concrete, rivet pitch in compounds and built-up girders, grillage foundations, a plea for smooth working of the London Building Acts (1909) amendment.

DECORATIVE POSSIBILITIES IN CONCRETE.

Since the passing of the master mason, that gorgeous figure of the Middle Ages, his functions have been fairly evenly divided between the architect and the engineer. The first is commonly charged with the æsthetic aspect of a building, and the latter with its safety and efficiency, and in cases where both these considerations, in just proportions, receive due weight the result is as near ideal as one can hope for. Unfortunately, however, there is a tendency to show the safety and efficiency of a building to the extent almost of ruling out its artistic possibilities altogether, and this is found especially in buildings of a purely commercial or manufacturing type, in which the question of beauty is not considered at all, or only considered after the costs of the whole have been calculated and determined. It is then put down as an "extra," on which as little as possible must be spent.

In reality, the most common buildings of a manufacturing type can be made to conform to pleasing lines without the additional expenditure sometimes thought necessary. After pleasing lines have been determined, there comes the question of decoration. In many instances this is carried to extremes, and we find exquisite examples of stone carving and cornice work being placed at the top of an eighteen or twenty-storey office building, which no one can see or appreciate except a possible few located in the offices upon the opposite side of the street.

There is an old maxim to the effect that the designer should ornament his construction and not construct his ornamentation. This is an admirable saying, but it should be subordinated to another rule: that he should ornament his structure only if he lacked the skill to make it beautiful in itself. A structure of any kind that is intended to serve a useful end should have the beauty of appropriateness for the purpose it is to serve. It should tell the truth, and if the character were such that it can be permitted to tell the whole truth so much the better. It should preferably be beautiful and not beautified.



UNITY CHURCH, OAK PARK, ILLINOIS: DETAIL.

ADMINISTRATION BUILDING OF T
SOUTH PARK COMMISSIONERS, CHIC
DETAIL OF ENTRANCE.

There is a certain charm about a massive structure almost irrespective of design. The sight of a pyramid o
desk would call forth no expression
terest or enthusiasm, but let this gr
size until it assumes the proportio
those famous structures of Egypt
many pilgrimages will be made to
it. Of course, the Egyptian pyrami
assumed to be the resting-place of
and the placing of the blocks require
use of more muscle or machinery th
at present have any knowledge of, bu
idea of their beauty and grandeur o
primarily from the immensity o
structures.

There is no reason, however, why
should not be combined with decor
provided the design is not made su
nate to the decoration. This combi
has often been used very effectively.
question is, what medium shall be ch
At the Unity Church, Oak Park, U
which we illustrate, the building
only monolithic concrete, but the orn
tation partakes of the same c
teristics, having been cast at the sam
and of the same material. In a bu
of this type, however, much atte
decoration would be fatal, and the un
sive style adopted detracts not
slightest from the dignity obtain
large areas and massive constructio
is anything but a beautiful or imp
building, but the frank recognition
limits in ornamentation commen
With a different style of building
treatment may be entirely differen
the concrete be called on to assu
most intricate shapes, as in the case
Administration Building. Chicago,
shown.

No doubt everyone is familiar wit
seems to be the proverbial small town
supply tank, with its hemispherical
and sprawling legs—anything b
ornament in the community. This
type of structure was imitated at
Indiana, but so well has it been co
that the tower is a thing of beau
possesses real architectural merit.
work of moulding so large a struc
reinforced concrete was greater bec
the forms required, the total height
125 ft. But the finished structures
fied the labour.

An unexpected test list of building
rials presented itself during the San
cisco earthquake. The delightfu
tower on the Mills College campus w

MELBOURNE PUBLIC LIBRARY. BATES, PEEBLES, AND SMART, ARCHITECTS.
(See "Kahn System Illustrated.")

few buildings which remained un-
ged in that neighbourhood.

crete, still in its formative state of
pment, is a comparatively new
ectural material, although struc-
it has been proving its permanence
any years. The particular reason
atification comes in the new dis-
es and new uses to which it is con-
y being put. Every day there
some thoughtful genius who has dis-
d something new and worthy of con-
ion. For example, Frederick
s, of New York, devised a wonder-
simple method of duplicating the
ntricate of cast ceilings in solid con-
with a decided saving of material.
heme consists simply in employing
coffers of moulder's sand, which
ced on the form before the concrete
ed. When the forms are removed
nels are exposed, the whole being
plished in one operation. Far more
g surfaces are obtained than were
esented by the old plaster-of-paris method of applying previously cast panels to do the work.

A few years ago the theory of applying concrete by means of a hose and nozzle met with derision, but every day we hear of more work being done by this method, the machine being designated as the "cement gun" and the concrete "gunite." An interesting piece of work has been accomplished by the Boston Elevated Railroad at the foot of O Street, Boston, where a garden fence has been constructed by this method. The base and posts are built of concrete poured into the forms in the usual way, the posts being relieved by protecting brick quoins. The street faces of the panels were shaped by means of a wooden form and each central panel was faced with steel. The concrete was applied from the rear with the cement gun, making the panels $2\frac{1}{2}$ in. thick and the styles 4 in. thick. The interesting point in the operation is that the entire panels are made in one piece and at one operation.

We desire to make an acknowledgment to the "Contract Record" (Toronto) for most of the information contained in this article.

TER TOWER, GARY, INDIANA.
"Decorative Possibilities of Concrete.")

"KAHN SYSTEM ILLUSTRATED."

Under this title Messrs. The Trussed Concrete Steel Co., Ltd., Caxton House, Westminster, have issued an album of finely printed half-tone illustrations forming a typical selection from more than ten thousand important structures built on the Kahn system of reinforced concrete. Although, in the "Foreword," it is stated that the publication is presented in the belief that the best arguments that can be submitted in favour of a system are the many finished structures wherein it has been used, there is, nevertheless, very usefully included a brief résumé of the advantages of reinforced concrete, with special reference to the Kahn system.

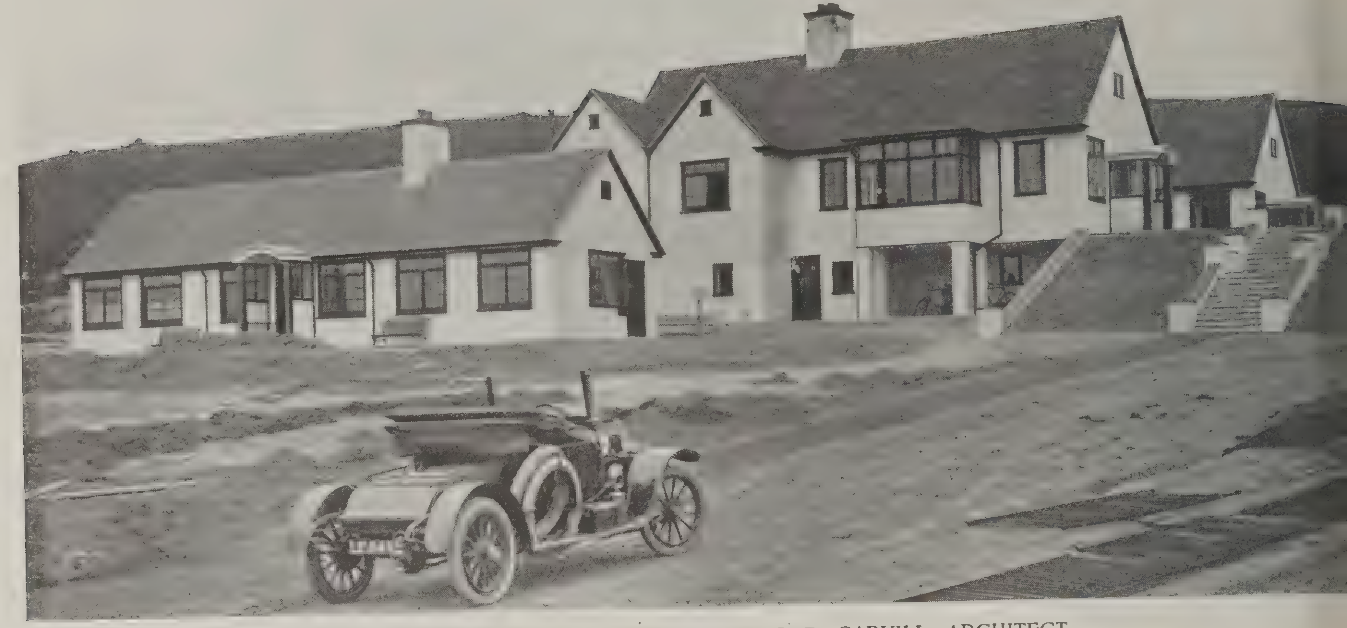
Of the Kahn Trussed Bar it is stated that it is primarily a reinforcement for beams, girders, and heavy slabs, where special provision must necessarily be made for internal stresses other than direct tension, or in places where stresses are more or less of an indeterminate nature. The prongs or diagonal members may be regarded as extra reinforcement, thus providing not only for the horizontal stresses due to the bending tendencies, but also the vertical or shearing stresses caused by the direct weight of the applied load. The Kahn Trussed Bar is designed to provide as a single unit for all the stresses which the steel portion of the structure is calculated to resist.

It is further noted in the booklet that the Kahn Rib Bar has been designed to meet the requirements of those who demand a mechanical bond for reinforcement. It provides transverse ribs at intervals along the entire length of the reinforcement, and these obviate the necessity for hooking or fishtailing the ends of the bars. The bar is rolled in sections varying from $\frac{3}{8}$ in. to $1\frac{1}{4}$ in. square, rising by $\frac{1}{8}$ in., and in lengths of from sixty to seventy feet. Best grade medium open-hearth steel, complying with the requirements of the British Standard Specification and the R.I.B.A. recommendations, is the material employed.

Hy-Rib is described as a self-supporting reinforcement, which does away with the necessity for centering. When used as a reinforcement it combines the centering forms with the reinforcement in a scientific and practical manner, as a result of which an economical construction is obtained. Its use, however, is not limited to floor slabs and walls, as it is an excellent material for suspended ceilings and internal partitions, when its use dispenses with furring or strutting.

By agreement with the patentees of hooped concrete for compression members, the company manufacture and sell for use in the construction of reinforced buildings spirally coiled reinforcement for columns, or other members subjected to compression. Members subjected to severe compressive stresses have a tendency to burst under a heavy load, and spirally coiled reinforcement eliminates this form of failure, the reinforcing rods being mechanically coiled to the true diameter in which they are to be used.

About 150 photo-process views show almost as many varieties of buildings in which the Kahn system has been adopted —many of them architecturally beautiful, others more austerely utilitarian. In the former category are the Scottish Union and National Insurance Company's building at Leeds; the Wesleyan Hall, Westminster; the Melbourne Public Library



ROYAL CROMER GOLF CLUB-HOUSE. G. B. CARVILL, ARCHITECT.

(Bates, Peebles, and Smart, architects), which is here reproduced, and of which the dome is one of the largest in the Empire; the Villa Marina Kursaal, Isle of Man; Bournemouth Municipal Art School; Lecture-hall for the York Philosophical Society, the Atlas Chambers, Leeds, and many others. Hotels, warehouses, furniture depositories, workshops, offices, cinemas, garages, factories, banks, baths, billiard halls, clubs, private residences, water towers (see p. 143) and many bridges, indicate but a few of the limitless applications of the Kahn system, and the examples, though mostly drawn from the United Kingdom, include several from America. Altogether a most interesting album.

REINFORCED CONCRETE: MEASUREMENT AND QUANTITIES.

At a recent meeting of the Concrete Institute the following reports were submitted by Mr. S. Bylander as vice-chairman of the Reinforced Concrete Practice Standing Committee: (1) Draft report of the joint committee of representatives of the Quantity Surveyors' Association, the Quantity Surveyor Members of the Concrete Institute, and the Reinforced Concrete Practice Standing Committee of the Concrete Institute on a "Standard Method of Measurement for Reinforced Concrete." (2) Draft report of the Reinforced Concrete Practice Standing Committee of the Concrete Institute on a suggested "Tabulated Form for Preparing Quantities for Reinforced Concrete." The reports were submitted in the draft form in order that criticisms might be received before the final reports were issued.

The first-named report gave a number of headings consisting of a list of parts of construction, classified under the three main headings of (*a*) Concrete, (*b*) Centering, shuttering, etc., (*c*) Reinforcement, the unit of measurement to be employed for each being set out together with the manner of measurement. Generally it was proposed that the work on each floor should be kept separate, stating the height from the ground to the several floors. The concrete, centering, and reinforcement for each floor should be kept together. No reinforcement should be deducted from the concrete, otherwise all measurements to be nett unless stated and notwithstanding any trade custom to the contrary.

With a view to simplification and convenience, it was proposed that the units of measurement throughout should be the foot and the cwt. This basis is not departed from by the recommendation that centering for large areas should be measured "per square," for that conforms to the decimal system, being merely a decimal multiple of the foot.

The report also included a suggestion for the manner in which, in cases in which the working details were not complete, engineers should indicate (by drawings) for the guidance of their surveyors when preparing the quantities, the thicknesses and weights of reinforcements. The reports, after considerable discussion, were sent back to the committee for reconsideration. Finally reports will be issued in due course.

ROYAL CROMER GOLF CLUB-HOUSE.

The golf clubhouse illustrated on this page takes the place of an old building, which was mainly of corrugated iron. The site is a new one—about a quarter of a mile away from the old. From the first it was decided by the committee that the new building should maintain the character of a golf clubhouse as distinct from the expensive and ornate type which in many quarters is now being adopted. Moreover, it was necessary that the new building should be erected in three months during the winter, so that as little inconvenience as possible should be caused to the members.

The clubhouse is built upon a bric structure, part of which forms a lo basement storey on the lower port the sloping site, and contains store staff rooms, bicycle spaces, etc. upper portion of the building is const on studwork with steel Hy-Rib lathi cement waterproof coating on the ex The interior is panelled with a simp of boarded framing stained dark. fireplaces are in 1-in. bricks treated. The ladies' clubhouse is lar construction, but is a separate ing. Mr. G. B. Carvill was the arc

Reference should also be made plates in this issue, one of which sh front elevation of the building, t with the plan, which may be studi considerable interest.

MANCHESTER BUILDING TR EXHIBITION.

The eighth Manchester Building Exhibition is now nearing complet will be opened on Tuesday, Marc 3 p.m., by the Right Hon. th Mayor of Manchester (Alderm McCabe, J.P.). The chair will b by Alderman J. R. Wilson, chai the Improvements Committee. management inform us that in to the majority of the old exhi large number of new firms hav space. The model buildings wh be on view should prove of conside terest to architects and other pro gentlemen, for whom special da been set apart, viz., March 5 and between the hours of 11 a.m. and

The exhibition director is Mr. H. Luke (joint managing dir Messrs. Walter Cawood, Ltd.), had great experience in all classe hibitions, particularly those c with the engineering and shipbui dustries.

IN PARLIAMENT.

)ur Press Gallery Representative.)

he Building Trade Dispute.

Alden asked the President of the
f Trade if he could see his way to
s advice and assistance to the em-
and men of the building trades in
ndon area, with a view to settling
oute, which was causing suffering
dship.

Burns replied that the good offices
oard of Trade were at the disposal
parties to the dispute should they
avail themselves of them, and the
ndustrial Commissioner had been
ent communication with both par-
e understood, however, that at the
efforts were being made in other
to arrange a conference on the

Tyson Wilson asked Mr. Wedg-
nn, as representing the First Com-
r of Works, whether the Office of
ad insisted on the continuance of
nary repair and maintenance work
rnment buildings, in spite of the
dispute in the building trade; and,
hy this policy had not been ex-
o contract construction work.

edgwood Benn, in reply, said that
e dispute began the Office of
informed the maintenance con-
that they could not allow it to in-
ith the public service. If by con-
struction work "lump sum" con-
ere intended, the First Commis-
uld only reply that he was bound,
the contractors, by the conditions
ntract.

harles Duncan asked whether, in
to the three young men taken on
w Home Office building from the
Association, a number of others
been taken on at the same place
informed that if they did not sign
lar recently issued by the build-
oyers of London they would be
to prison; and whether the hon.
would have inquiries made into
er and ensure that the Office of
as not lending its support in any
e employers in connection with
nt lock-out.

edgwood Benn said the Borstal
on reported that since October or
r last, when the three lads men-
re first employed on the Govern-
ldings no youths had been taken
Association by the contractors.
s no truth in the statement that
al lads had been told that they
sent back to prison if they did
the circular of the building em-
With regard to the last part of
on, the First Commissioner was
giving any support to the em-
d did not intend to depart from
de he had taken up.

ncan asked if the boys had been
ign the paper.

dgood Benn said he thought they

Vestminster Hall Roof.

hitehouse asked whether any
could be made as to the condi-
e roof of Westminster Hall and
s necessary.

dgwood Benn said: A very com-
ey of eight trusses and six bays
ry able, exhaustive report and
have been prepared by Mr.
e of the principal architects in
of Works. The First Commis-
es to be able to publish this report and place the drawings in original in the Library for members to see. It is proposed that two trusses and three bays most affected by decay shall be dealt with during the next financial year. The present scaffolding being purely for survey and examination purposes will be removed and the repair work carried out from a movable steel supporting centre and scaffold.

In reply to further questions, he said he was afraid it was impossible to say when the repairs would be completed. He thought he might say that the public would be admitted as soon as the danger of fire was removed, but he could not give an answer without consideration and consultation with the First Commissioner.

SPECIAL LEGAL REPORTS.

Action against a Builder: Alleged Obstruction by Building.

Vere v. Minter.

February 18. Chancery Division. Before Mr. Justice Warrington.

This was an action by Canon Langton George Vere, of St. Patrick's Roman Catholic Church, Soho, to restrain Mr. F. G. Minter, builder, of Ferry Works, Putney, from building upon land at 22, Soho Square, so as improperly to block the ancient light of the church and the house, 21A, Soho Square, adjoining, in which the canon resided.

Mr. C. J. Matthew, K.C., and Mr. Stokes appeared for the plaintiff, and Mr. Clausen, K.C., and Mr. Blanco White for the defendant.

Mr. Matthew explained that the action came on without pleadings on an order made on January 13, when there was a motion for injunction before the Court. The premises, counsel continued, were originally the famous Carlisle House, and were occupied at one time by Mrs. Cornelys, and part of the ecclesiastical property was on the site of the ball-room that belonged to that lady. The present church was opened in March, 1893. Canon Vere declared that the present building of the defendant's was interfering with the light in various directions, principally in the basement and dining-room of his house, but also of the clerestory of the church and the north end window. The light, too, of a first floor bedroom window had been obstructed, and it was to this room, said the canon, that he sometimes repaired for study at certain times of the year. It was cooler than other rooms and that quality was occasionally very desirable.

Mr. R. L. Curtis, architect and surveyor and a Fellow of the Surveyors' Institute, ex-Mayor of West Ham and a J.P. for West Ham, living at Highgate and practising at Finsbury Square, gave evidence that the building complained of materially interfered with the light. He preferred to say nothing about the diminution of annual value to be attributed to the decrease of light.

Mr. John Robert Moore-Smith, F.R.I.B.A., also an ex-mayor of West Ham, practising at Union Court, Old Broad Street, said he had thirty years' experience in London of such lighting troubles, and he was not averse from discussing the decline in value in the present instance. He had advised settlements in other cases where money had been paid, and he had already privately stated here that if there was to be compensation it should be not less than £750, and anything between £750 and £1,000, with costs. But Canon Vere had said: "I don't want money; I want light."

Mr. Clausen: Taking the ground value at £100 and the rateable value at £84—

Mr. Moore-Smith: I would rather not suggest the diminution in annual value.

Counsel: I suggest that if the rateable value is now £84 it would not be diminished below £64.

Mr. Moore-Smith: I would rather not speculate upon a problem of this type.

Mr. Thomas Henry Scott, Licentiate R.I.B.A., chief assistant to Mr. Curtis, generally corroborated that gentleman's evidence.

For the defence Mr. William Woodward, F.R.I.B.A., F.S.I., of 13, Southampton Street, Strand, was called. Mr. Woodward said he was a member of the Council of the Royal Institute of British Architects and Chairman of the Practice Committee of that Council. He had had thirty-five years' experience and he had been to this church and he could say that nowhere in it was there "a dim religious light." It was a particularly well-lighted church, and the new building would interfere with the light hardly at all. "The altar," Mr. Woodward went on, "will still be perfectly fit and proper for its purpose, quite apart from the candles. Indeed, I should like to see, and many others would, a series of stained-glass windows in the church. The church would bear it very well." No doubt a diminution of light would be caused to the dining-room window—this was, he held, the chief part of the plaintiff's case; but there would still be enough light to give a comfortable occupancy.

Cross-examined: He would admit that the drawing-room was indifferently lighted already.

His Lordship: And you say that if an indifferently lighted room is more indifferently lighted it will still be comfortable?

Mr. Matthew: What is your idea of a comfortable room?

His Lordship: If the canon were eating a bony fish for breakfast would he, under the shade of the new building, have less difficulty in finding the bones?

Mr. Matthew: I do not imagine, Mr. Woodward, that you would set up as a competent judge of what is the comfortable occupancy of a chapel.

Mr. Matthew elicited from Mr. Woodward that he was thinking of an opposite wall complained of as though it were covered with white bricks. He was not the architect of the building.

Mr. E. Keynes Purchase, F.R.I.B.A., F.S.I., of 20, Maddox Street, W., said he had been in practice as a surveyor for thirty years and he called the threatened injury to the lighting of the church infinitesimal.

Mr. Purchase had two alterations to recommend: (1) To clean the windows (of the church and a first-floor room in the house); (2) to amend the plans by setting back a wall and two roof slopes.

Mr. Clausen observed that the plaintiff was quite prepared so to alter his plans.

The plans by which they were building, Mr. Purchase continued, would only slightly diminish the light in the dining-room and would not create a substantial nuisance.

Mr. Clausen offered, with the alteration of plan, to pay costs to the present moment and submit to an expert inquiry for damages. He thought the damages would now be slight.

The canon had told of shaving without artificial light at seven in the morning and his Lordship observed that the plaintiff's case had been as little exaggerated as any case he had ever heard.

Even so, Mr. Clausen said his client did not think there was more than a couple of hundred pounds in the whole affair.

Mr. Matthew urged that this case represented an aspect of ancient lights which was often overlooked. Here was a row of windows on several floors of the presbytery, and supposing those premises were to be transformed into offices, the value of the light coming through that succession of apertures must be enormous. Whatever the future of the house, light was essential, for the occupants, clergy of other generations, were anchored to the spot by the necessity of proximity to the church. Mr. Clausen's talk of diminution in annual value was trivial.

His Lordship said he found that if the new buildings were erected the result would be a substantial privation of light sufficient to render the occupation of the plaintiff's house uncomfortable and prevent the canon from enjoying it in as beneficial a manner as he had previously done. With regard to the church, he found the erection of the buildings as proposed would cause a substantial privation of light sufficient to render the occupation of that part of the church which was under the gallery uncomfortable, and the use of the chapel with its altar at the west end also uncomfortable. In both cases the plaintiff had proved there would be an actionable nuisance. Injunction naturally followed, but an offer had been made in the last stages to alter the plans. He should make the injunction asked for, but he thought that as the plaintiff had been very reasonable throughout it would be possible to carry out the changes now, so that they met with his approval. Plans should be discussed between the parties. Costs would be the plaintiff's up to and including the judgment.

Question of Building Line: Superintendent-Architect's Certificate.

In Re the London Building Act, 1894: *Clode and Others v. London County Council.*

February 18. Court of Appeal. Before Lords Justices Vaughan Williams, Kennedy, and Swinfen Eady.

This appeal came on for argument from a judgment of Justices Ridley and Lush, sitting as a Divisional Court of the King's Bench Division in the matter of Clode v. the London County Council. The appeal in the Court held below was against an order of the Tribunal of Appeal in the matter of the London Building Act, 1894, on the certificate of the Superintending Architect, dated September 28, 1909, defining the general line of the buildings on the north side of Euston Road, between Hampstead Road and Osnaburgh Street. The appellants were Mr. William Leslie Brutton Clode, the Rev. Thomas Farmer Collins, and Mr. Martin Arthur Clode, trustees under the will of the late Mr. Lewis James Leslie, the respondents being the London County Council. The buildings referred to were Nos. 378, 380, 382, and 384, Euston Road.

In the Court below the judges differed, Mr. Justice Lush being of opinion that the Tribunal of Appeal took an erroneous view when they held that they were bound by the authority of cited cases and that the order they made was wrong. In his opinion the appeal should be allowed.

Mr. Justice Ridley differed. In the opinion of the Tribunal of Appeal, he said, the proceedings of 1867 took place in connection with a proposal for fixing a new building line, and were not intended to be, and were not a decision as to the general line of buildings.

In order that there should not be a division of opinion, Mr. Justice Lush withdrew his judgment and the appeal was dismissed with costs.

At the conclusion of the legal arguments the Court reserved judgment.

PROJECTED NEW WORKS.

Picture Theatre, Llandudno.

Llandudno U.D.C. have approved plans of a new picture theatre. Mr. Hewitt is the architect.

Cinema, Burryport, Swansea.

Burryport Urban Council has provisionally approved of plans for a new cinema.

Improvements, Dewsbury.

A new scheme for the development of Northgate, Dewsbury, includes the formation of two arcades, in which there will be twenty-three shops.

Housing, Lynn.

Lynn Town Council have adopted a scheme for laying out Friars Fields in building plots for 130 houses, to let at rents from £10 to £18 per annum.

Coronation Hall, Ulverston.

Sanction has been given by the L.G.B. to the borrowing by Ulverston U.D.C. of £3,000. This sum is to be devoted to the cost of the proposed Coronation Public Hall.

Housing Scheme, Altrincham.

Altrincham D.C. have authorised the Housing Committee to prepare a scheme for the erection of artisans' dwellings on a plot of land which was formerly occupied by the fever hospital in Lloyd Street.

Infirmary, Greenwich.

Greenwich Borough Council have agreed, subject to the approval of the Local Government Board, to purchase, for £500, a plot of land at Maze Hill on which to build a tuberculosis infirmary, which is estimated to cost about £1,500.

Cripple School, Rutherglen.

Glasgow School Board have applied to Rutherglen Dean of Guild Court for permission to erect a school for the east end cripple children of the city of Rutherglen. It is to provide accommodation for 360 children.

Site for a Sanatorium, Herts.

The action of the Chairman of the County Council, and the Chairman of the Public Health and Housing Committee, in sanctioning the purchase of ninety-two acres of land situate at Winch Hill between St. Albans and Watford for the sum of £6,036 8s. 4d., as a site for a sanatorium and hospital for the treatment of tuberculosis, has been approved by the Herts. County Council.

Buildings, Barrow.

Plans of the following buildings have been approved: One hundred and nineteen semi-detached houses in Dundee Street, Farm Street, and Dunoon Street, for the Cavendish Park Estate Co.; three pairs of semi-detached houses in Roose Road, for Mr. S. Barnett; seven dwelling-houses in Salthouse Road, for Mr. R. T. Dockeray; branch bank on Promenade, Walney, for the Manchester and Liverpool District Banking Co., Ltd.; nineteen dwelling-houses in Worcester Street, for Mr. John Ross; one pair of semi-detached houses at Tummer Hill, for Mr. J. S. Crewdson.

COMPETITIONS

Bath City Secondary Sch

The result of the above com
announced as follows: (1) Messrs
and Farmer, of Walsall. (2)
McKewan and Madeley, of Col
Birmingham. The authors of t
placed first will be appointed ar
the school unless it be found,
ders are received, that the cos
their estimate by more than 10 p
premium of 50 guineas is awar
authors of the design placed sec
Henry T. Hare, F.R.I.B.A.,
assessor.

Torquay Theatre.

The plans of Messrs. Richar
Gill have been selected in t
limited competition held for
building. The work will be c
conjointly by Messrs. Richardso
and Mr. F. G. Moore, of Torqu

Tenemented Property, Newcastl

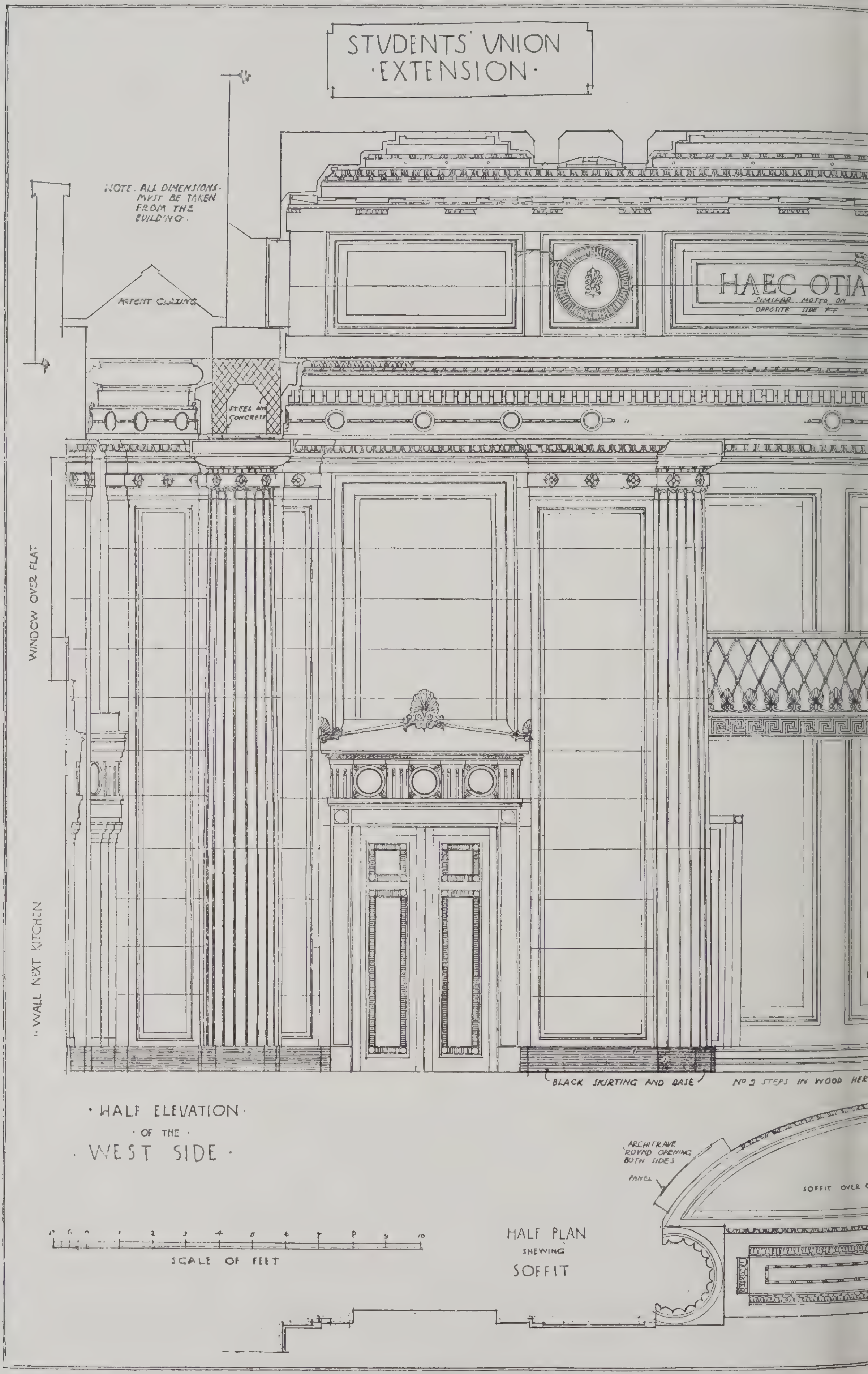
Architects practising in New
invited by the trustees of the Vi
Hospital to submit plans and s
dealing with tenemented pr
Forth Banks and Hanover Stree
cations for particulars should b
later than February 28th to M
Sutton, Clerk to the Trustees,
Street, Newcastle-on-Tyne.

Barnsley Town Hall Compe

Members of the Society of Arc
further notified that the amendm
conditions proposed by the pro
not sufficient to justify the So
drawing its disapproval. Memb
ferred to Clause 4 of the Society
Ethics, and are requested not t
in this competition.

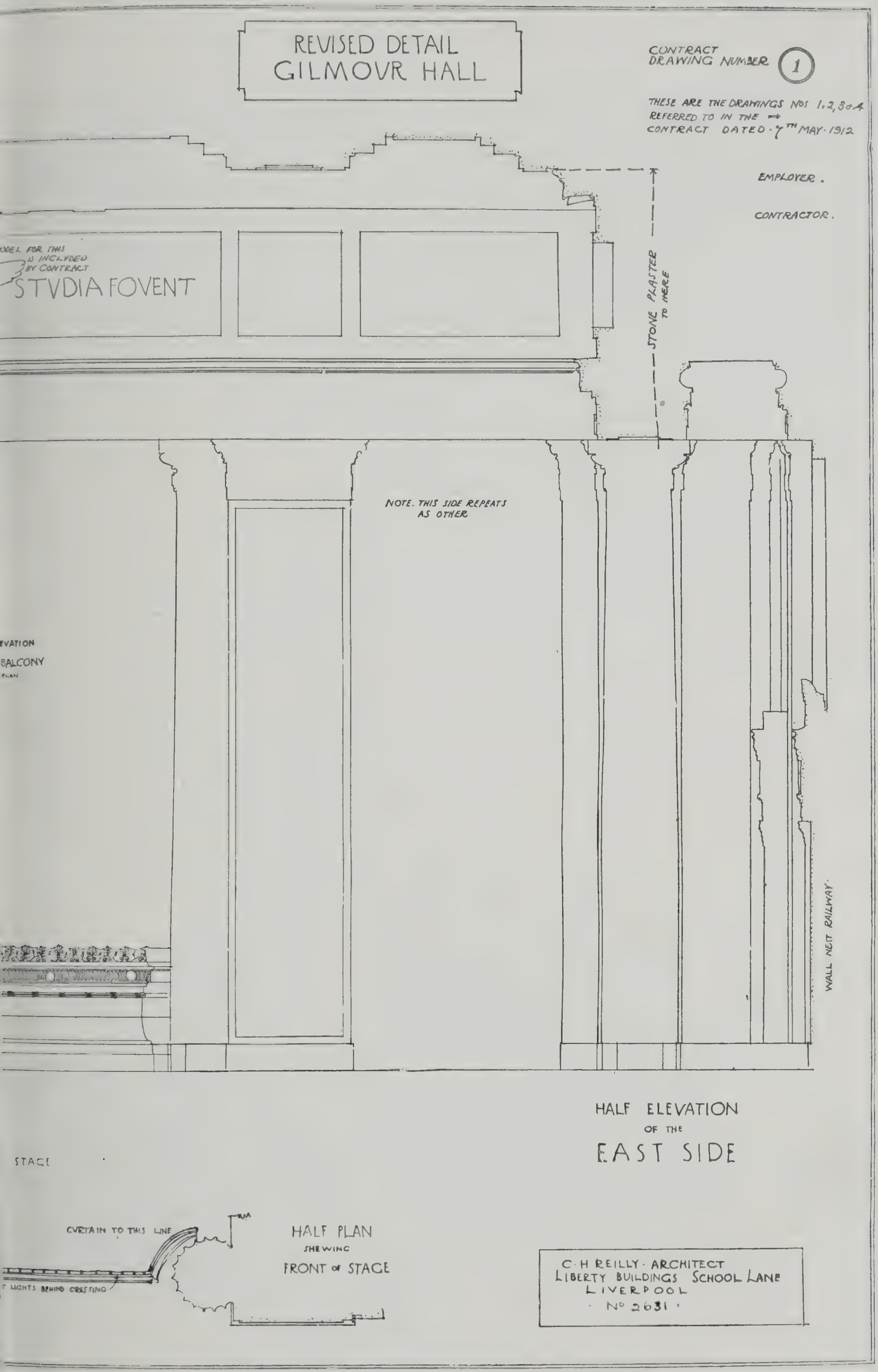
THE LONDON LOCK

By the time this reaches the
reader, the result of Monday's
ference will probably be publis
will be seen whether or not
prospect of immediate settlem
dispute. Supposing the conf
have been conducted in the sa
mutual concession that has
negotiations possible, there may
mediate resumption of work
other hand, the men's represent
with them to the conference the
embarrassing knowledge that
the claim of the Federation to
in it they have excited the an
Syndicalists, who threaten fu
chief. With this heterogene
which includes several unions
no very definite connection with
ing trade, the employers have
fused to negotiate, and withdr
claim was the condition on whic
sented to conference, and was
quid pro quo which the men w
offer in return for the employers
ment of the document which t
were asked to sign individu
guarantee against wanton strike
whole trouble has arisen from l
dicalism, which seems to q
quarrelling's sake, the real p
solve is the control, suppression
nation of these capricious dist
ments. It is hard that the bulk
should have had to pay so dea
fault of the few; but on neithe
it be felt that the money has b
wasted if, in the upshot, some
means of extinguishing bargai
is evolved.



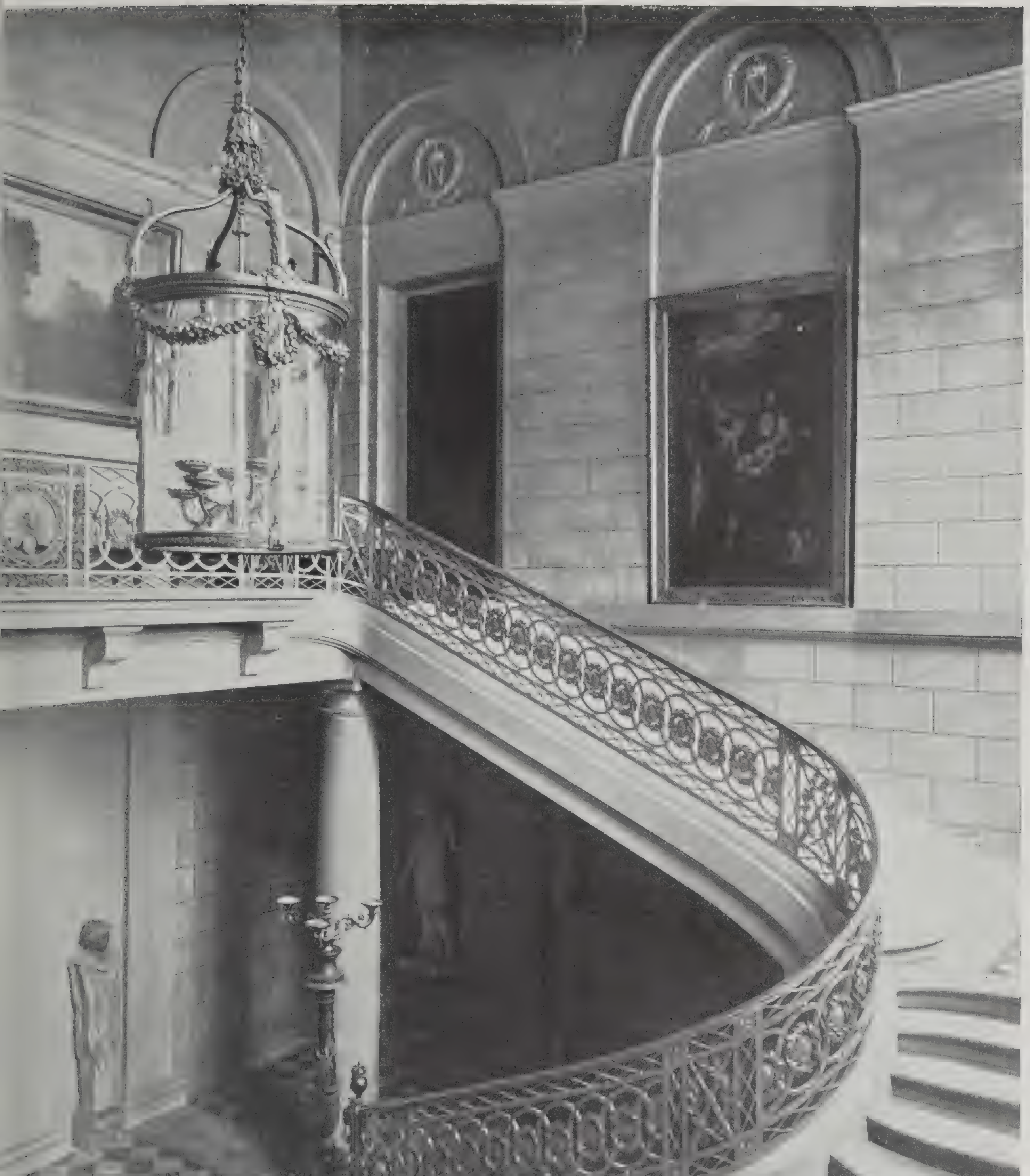
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XVII.—

PROFESSOR C.


REVISED DETAIL
GILMOVR HALL
CONTRACT DRAWING NUMBER 1
THESE ARE THE DRAWINGS NOS 1, 2, 3 & 4 REFERRED TO IN THE CONTRACT DATED 7TH MAY 1912
EMPLOYER.
CONTRACTOR.
ODEL FOR THIS IS INCLUDED BY CONTRACT
STVDIA FOVENT
STONE PLASTER TO HERE
NOTE. THIS SIDE REPEATS AS OTHER
EVATION
BALCONY
PLAN
WALL NEXT RAILWAY
HALF ELEVATION OF THE EAST SIDE
STAGE
CURTAIN TO THIS LINE
T LIGHTS BEHIND CRESTING
HALF PLAN SHEWING FRONT OF STAGE
C·H REILLY · ARCHITECT
LIBERTY BUILDINGS SCHOOL LANE
LIVERPOOL
· No 2631 ·

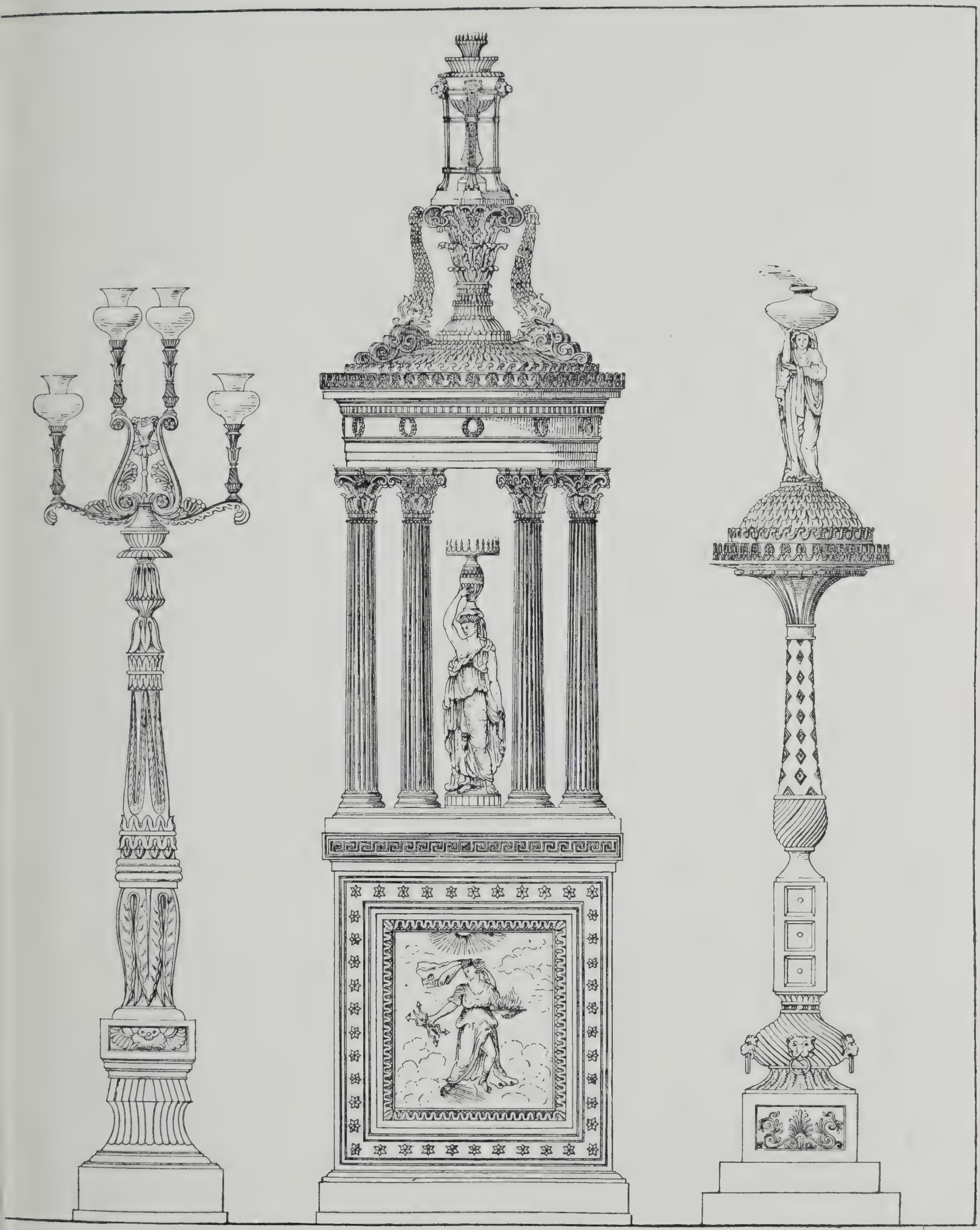
UDENTS' UNION, LIVERPOOL: HALF ELEVATIONS OF WEST AND EAST SIDES.

R.I.B.A., ARCHITECT.

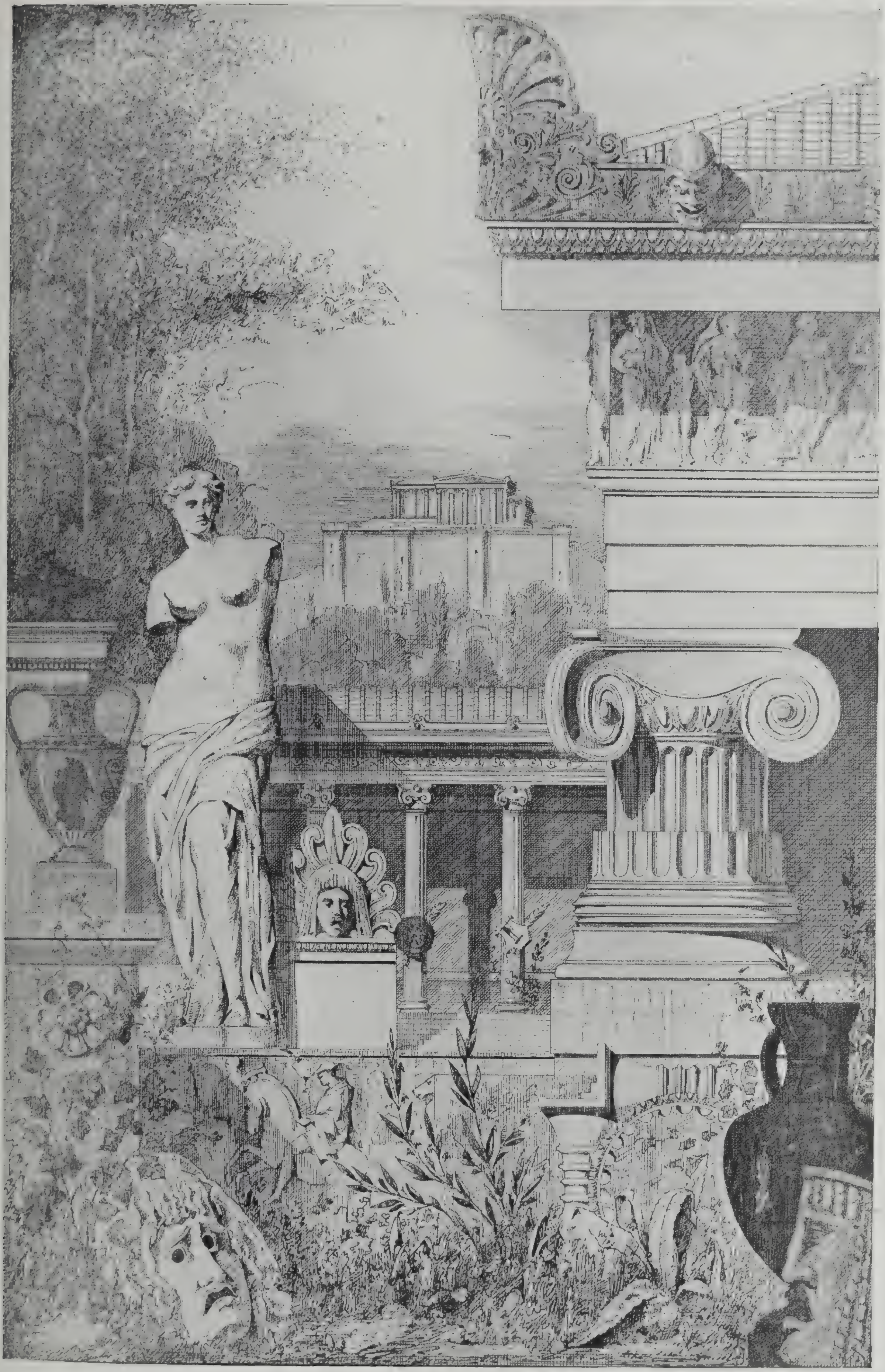


PALACE INTERIORS. II.—ESCALIER D'HONNEUR, COMPIÈGNE.

GABRIEL, ARCHITECT.

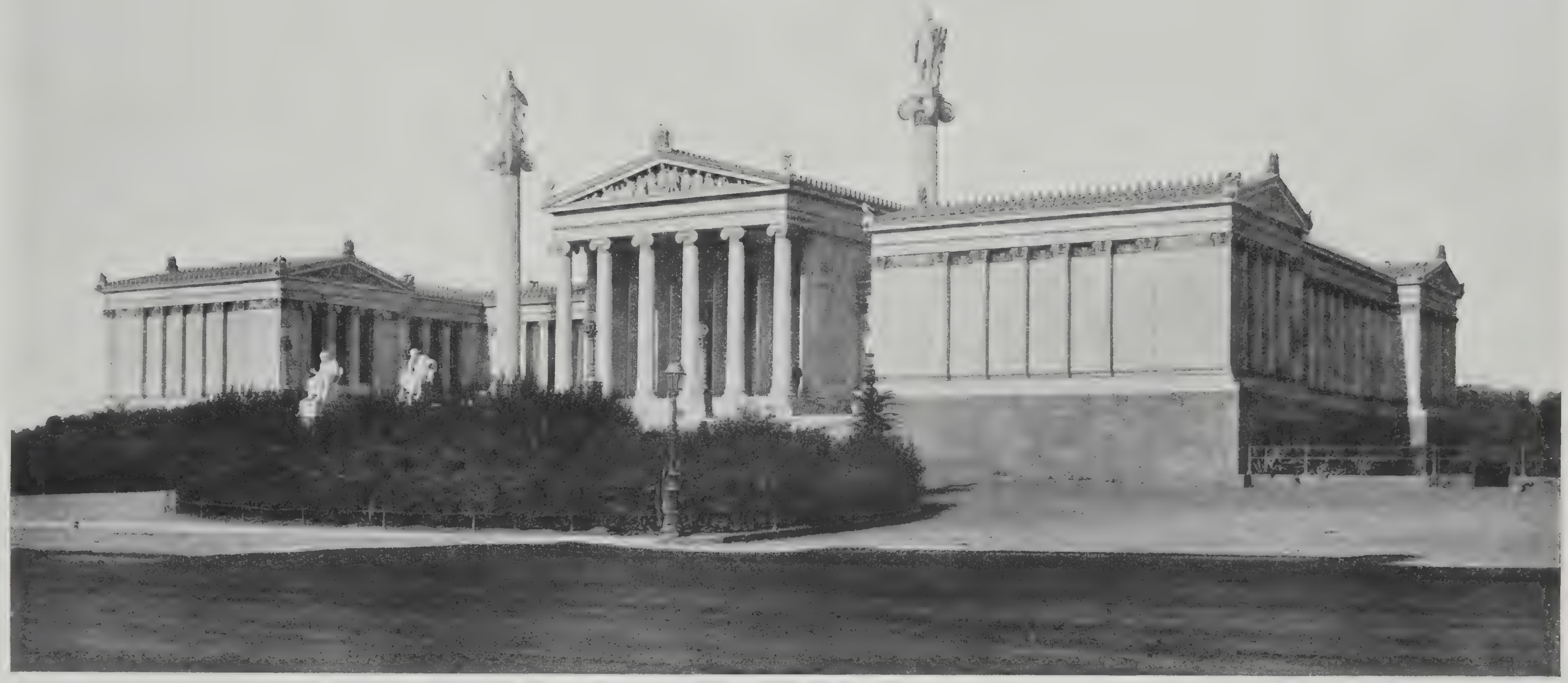


COTTINGHAM'S DESIGNS. IV.—BRONZE STANDS FOR GAS LIGHTS.



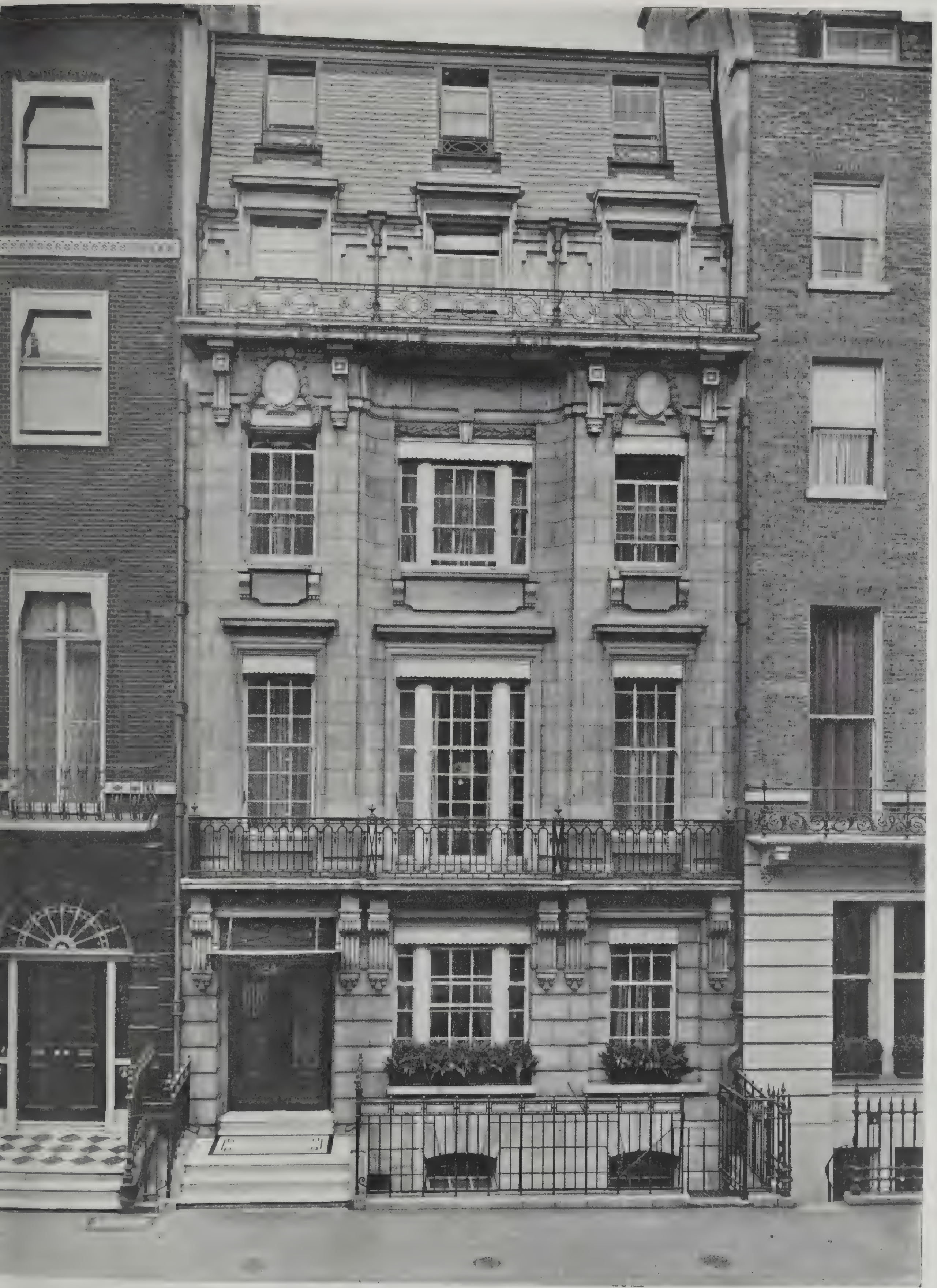
STUDENTS' DRAWINGS IX.—COMPOSITION OF THE IONIC ORDER (ODÉON).

BY M. DUVAL.



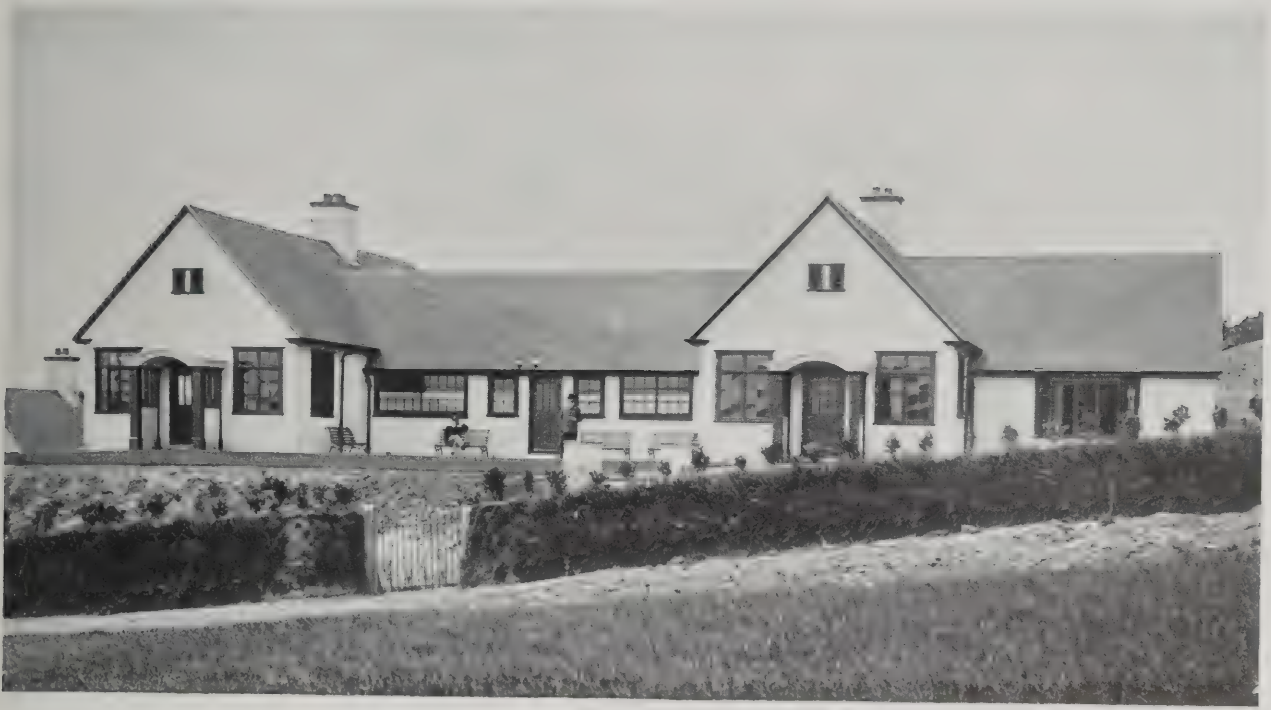
MONUMENTAL ARCHITECTURE. X.—THE ACADEMY, ATHENS.

THEOPHILUS HANSEN, ARCHITECT.

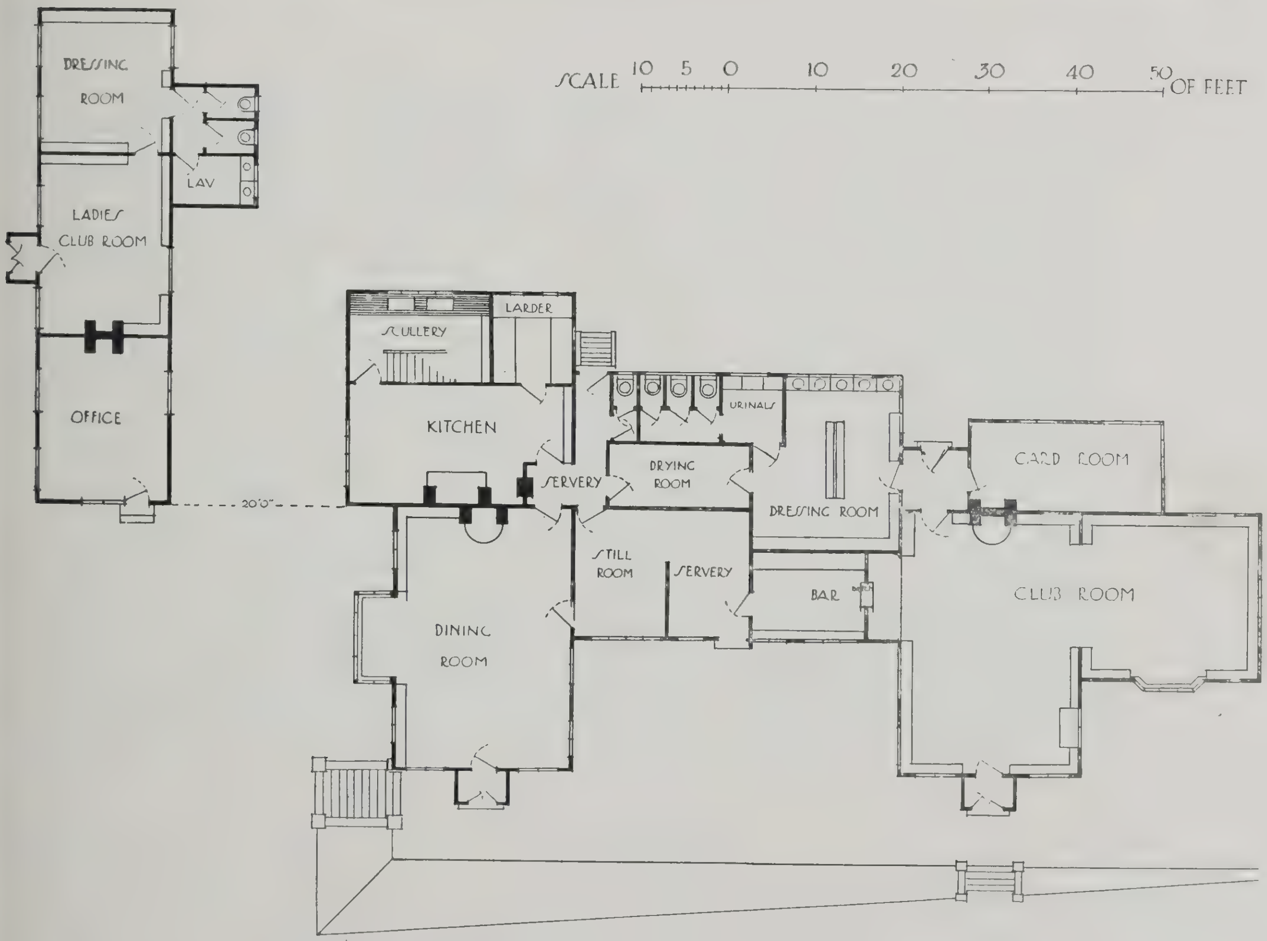


MODERN DOMESTIC ARCHITECTURE. XXIII.—No. 84, HARLEY STREET, LONDON.

CLAUDE W. FERRIER, ARCHITECT.



Front Elevation.



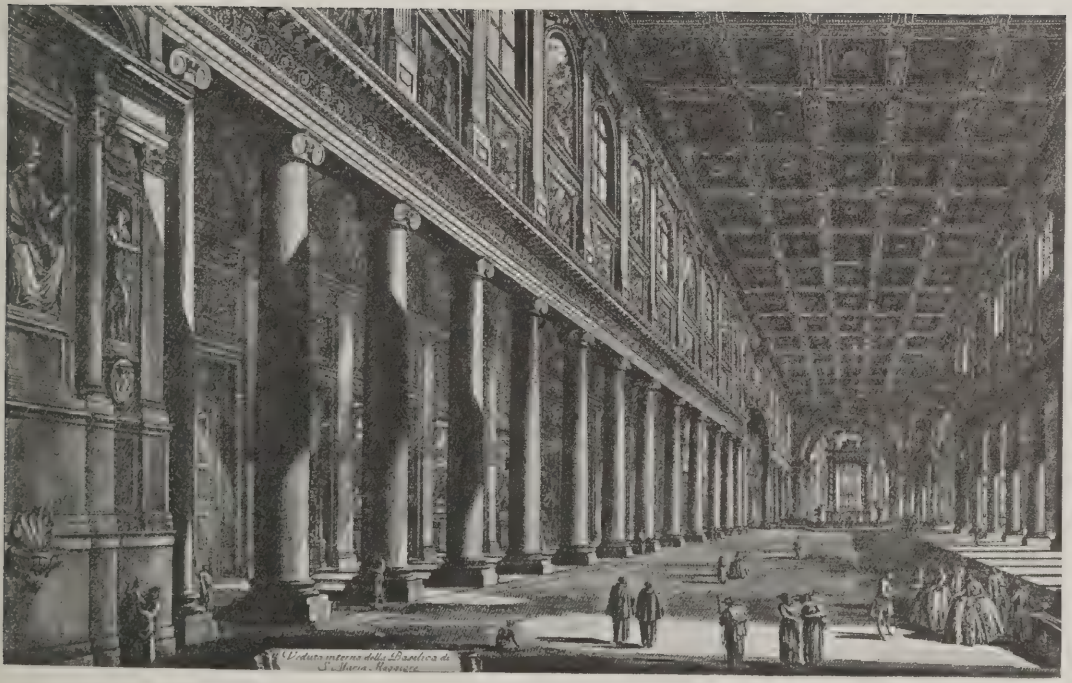
CURRENT ARCHITECTURE. XLVII.—ROYAL CROMER GOLF CLUB-HOUSE.

G. B. CARVILL, ARCHITECT.

THE
ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, March 4, 1914. Volume XXXIX. No. 1000.

No. 74.


Veduta interna della Basilica di
S. Maria Maggiore

(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

MARCH 4, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1000

The Railway Stations of London.

THE critical spirit of the present age is apt to disparage the transport achievements of the past century: the triumphs of Stephenson, Brunel, and Rennie, acclaimed in the delirium of the railway mania, are ridiculed as being inadequate to the needs of the moment; the cry is heard, "larger stations, diagonal lines, concentration," but the panacea suggested fails to convince.

The trunk lines which terminate haphazard in various quarters of the metropolis are the outcome of a narrow policy directed by the great Duke of Wellington, who, for strategic reasons, opposed the construction of a circular railway skirting the outlying suburbs and linking the projected main lines. Nearly three-quarters of a century has elapsed since the railways first came to London, and the loss of time and the inconvenience to travellers crossing the metropolis during this period, cannot be estimated. The introduction of the steam Underground and the completion of the Inner Circle partially solved the problem; the construction of the Tubes has furthered quick circulation, but the master mind is yet lacking to weld the existing main line systems into one homogeneous whole.

The nucleus of a comprehensive scheme is in existence, and the difference in levels presents no grave difficulty to the trained engineer. Co-ordination of interests must be the first step taken in a scheme of mutual improvement. Perhaps the mooted State acquisition of vested interests will crystallise a scheme which in some lights appears Utopian in its magnitude.

Proceeding with the argument, two facts present themselves to our notice. The first is the practicability of connecting the existing trunk terminals with that portion of the Underground system near the surface; and the second is the extension and architectural improvement of the great stations. A glance at the map of London reveals the fact that Euston Road is the true centre of the metropolis; between King's Cross and Paddington six important trunk lines are conterminous on the northern side of this thoroughfare and its extensions. All direct vehicular traffic between the northern and southern suburbs is forced to intersect this road at some point between its eastern and western extremities. The track of the rejuvenated Underground runs beneath the centre of the road for the whole of its length, piercing the heart of the City at one end and serving the residential centre of Kensington at the other. The completion of the Inner Circle via Cannon Street and Charing Cross to Victoria in the 'seventies connected three important southern lines, but left London Bridge and Waterloo derelict. A further development of the Underground from the City, beneath the river to London Bridge, and following the southern bank to Waterloo, offers possibilities of practical value. By the expedient of adequate junctions, duplicated tracks, alteration of levels, and the adoption of electric traction for transferring the through traffic, both for mails and passengers, of the main trunk lines, a constant shuttle interchange could be arranged. This scheme would retain the existing line of the Inner
Circle along the Embankment, but provides for it
fected extension along the southern side. It is
vant here to mention that electric traction has
successfully adapted to the handling of through
trunk trains both in Paris and New York. In ad
to the ordinary stopping trains completing the
between the various terminals, express trains ru
non-stop on separate tracks would follow as a mat
course. The adoption of this idea would result
removal of the hideous iron railway viadu
Charing Cross, and the transference of the w
terminus to a southern position would release a
able site. Professor Adshead lectured on this su
some years ago, and illustrated his remarks by
ful diagram. The existing low-level tubes wou
as tributaries to the main circular system; in th
gress of time these tubes will extend twenty-five
into the Home Counties. It is also safe to say
the policy of the trunk companies for the transfe
of through traffic will in the future be directed
avoidance of the metropolis by means of loop
starting forty miles away from London. The
realisation of the Channel Tunnel is a factor
will increase the existing volume of traffic to su
extent as to demand a total reorganisation of ex
methods, even if all other argument proves futile
temporary expedient of diagonal or converging
between certain of the terminals is childishly
quate to the enormous demands which the future

Having briefly sketched the order of the ra
systems, we are free to envision the architecture
main stations. Priority belongs to Euston, that
ment to early railway enterprise which Hardwic
ceived in 1837 as the terminus of the London an
mingham Railway. Its original aspect was o
monumental dignity, and as a screen it allowed
of room for future extension. The magnificen
and booking offiçes were added in 1848, and sinc
year Euston has grown piecemeal, but Hard
Neo-Classic buildings are enmeshed in a maze
considered additions. From the standpoint of
tectural improvement Euston, both as regards th
portance of its traffic and its position to the cen
London, offers possibilities for reconstructio
improvement unequalled in any other quarter. Th
a new Euston rivalling the majesty of the Pennsy
Railroad terminal in New York or the Gare du N
Paris. Not only would such a development be
ficial to the traffic returns of the leading English
pany, but its execution would, if rightly consi
give architecture an impetus for years ahead.
consideration of a dependency to Euston, beneat
surface, as an exchange station for the main
Circle, would form part of the scheme. Every
witnesses some foolish patchwork addition t
already interminable labyrinth.

The Classic plan of St. Pancras Station loftil
dains its mediæval dress; it is at present adequ
the long-distance traffic serving the terminal, b
allurements of this magnificent train shed, fit an
per as it is, admit of no extension. As an exam

ectural design the masking of the iron and glass by a pretentious hotel front is a curious example triumph of commerce.

admire the vigour of the twin arches spanning acks at King's Cross; the story of the train shed lly and honestly told, but the policy of the direc- the Great Northern Company in allowing imper- huts to be built in the foreground is inexplicable. growing importance of the Metropolitan Rail- vhich has dressed itself in new stone to suit the y of Baker Street, is a sign of the wealth of the ɔs. Marylebone, masked by the provincial hotel , brings the manners of Lancashire up to the of luxury. We have a tender regard for Pad- n; Frith educated us to revere Brunel's spread- n vaults of iron. The columned aisles of this are masked by Hardwick's Hotel: the giant ides carrying the balcony are curiously sug- of the gods of the boundaries, for this is the last northern terminals.

oria, externally, is a sorry compromise. Inter- t lacks majesty, and its lengthy platforms stretch atitudes almost to Clapham Junction. The new loo may be eminently practical, but otherwise ents a wasted opportunity.

non Street and London Bridge are survivals of ian smugness; those who frequent these build- ep back unconsciously into the early 'seventies. ast area of Liverpool Street almost demands a to itself, yet its vastness is not so effectively sed or its scale manifested so much as that of its neighbour, Broad Street. There are other ter- to write about, holes in the wall, emergency and withal a disgrace to Modern Babylon.

A. E. R.

ention may be here called to an announcement end of page 150.—EDS. A. AND B.J.]

Function, Form, and Sociology.

NCHESTER, to judge by its press, has turned aside for a moment from the cares of business to ask itself whether it is capable of self-beauti- . In this connection Mr. Arthur W. Davidson, sing himself to the "Manchester City News," s to take the view that business and art are cilable, and that "Manchester being a business s main buildings are shops and warehouses. and warehouses are places devoted to the ex- of profit. The law of architectural development hat form must be subordinated to function, it ly follows that unless architectural beauty can d to the function of modern business, there can of architecture in a business city. . . . If ction is not beautiful the form cannot be." It to us that this is arguing from an ancient remiss. Assuming that form must always be nated to function, there is nothing unbeautiful dea of business as such, nor need the building to business purposes be devoid of architec- tractiveness. Surely recent building develop- n the States, where it is recognised more clearly re that art *is* business, have proved clearly the old-fashioned character of this idea. too, all modern shop fronts are not "areas of orted plate glass." We grant that the ultimate for civic ugliness, in Manchester or elsewhere, ociological one; but it should not be forgotten is at least a factor in the process of social ation. Every beautiful building erected tends ce a desire for more of the same sort, and so to e that love of beautiful things which is the soul's heritage. If it is true that the better- social conditions lies at the root of any general ment in civic architecture, it is indisputable od architecture is a powerful stimulant of that f citizenship which social reformers are per- trying to instil into the "masses."

The Damage to St. Paul's.

THE appeal to the public by the Dean and Chapter of St. Paul's for £70,000 to enable them to maintain the upkeep of the fabric and ensure its permanent security makes it plain that no part of the money thus subscribed will be expended on repairing or experimenting with the foundations. The latter are to be reserved for future consideration. The work immediately contemplated will include the insertion of new stone, cement grouting, and especially the removal of the iron, inserted by Sir Christopher Wren or his builders, the corrosion of which has resulted in great mischief to the masonry at the base of the dome. If, as is suggested, the damage has been caused by the nearness of the ironwork to the surface, it is almost incomprehensible that Wren was personally responsible for this error of judgment. There is plenty of evidence that he was fully alive to this particular risk, and every student of his life and work knows that he was almost as learned as physicist and engineer as architect, and was thus extremely unlikely to commit so grave an error over so simple a constructional problem. On the other hand, and notwithstanding the fact that he was engaged on a vast quantity of other church work at the time St. Paul's was being built, one would have thought that the importance of his commission would have ensured his personal attention to details. The point raises an interesting question as to the relationship between and the individual responsibilities of Wren and his workmen.

Architecture and the Craftsman.

IN an admirable paper on "The Art Education of the Apprentice Decorator," which Mr. J. Ward, principal of the Dublin School of Art, read at the fifteenth annual convention of the Association of Master Painters of Ireland, stress was laid on the necessity for studying the rudiments and principles of architecture. The apprentice decorator should, in the third year of his pupilage, make a series of scale drawings of the Classic orders, of Renaissance architecture and its modern derivatives, and of Gothic and mediæval styles, as well as the Byzantine and Romanesque varieties. It were superfluous to say that this is sound advice as far as it goes: and it is rather pitiful to have to add that there is a certain amount of danger in it; mainly because a little learning is a particularly dangerous thing when it is apt to be misapplied in practice. There are at least two ways in which the young decorator with a smattering of architectural knowledge fermenting in his head may chance to go wrong. When away from rigid supervision, he may attempt to do in the flat what should only be done in the round, and may in other ways air his knowledge with excruciatingly inartistic effect. That, however, is a matter of very little consequence (since it could only affect work of so little importance that an architect is thought superfluous) as compared with a common perversion of educational facilities to which the intelligent young craftsman—painter or carpenter or what not—is strongly tempted. After an elementary course of architecture, he often feels quite competent to "commence architect," and does it if he gets the chance; and, in the absence of a Registration Act, there is none to say him nay.

An Injustice of the Housing Acts.

AN iniquity of the Housing of the Working Classes Act is strongly emphasised in an illustration that comes from Liverpool. A poor widow with a large family owns a few small houses against which the local authority has seen fit to make a closing order, in spite of representations that the property is kept in good repair and is occupied by respectable tenants. An appeal lies to the Local Government Board, but the owner cannot afford the expense, and in any case success is dubious. We have often said that, in a civilised country, it should not be possible to ruin inoffensive people, widows or others, by legislative enactment, and we have always urged the necessity of compensation in such cases. Our contention could not be put more clearly than in the words of the solicitor who states the hard case of this poor woman: "Could one imagine a more unjust case? The community change their ideas as to the type of house which should be built, and it is they who should pay for what they call—not reduce to beggary the unfortunate owner of any particular houses. When the houses in question were built, they were built in accordance with the by-laws of the time. When the seventy-five years' lease was granted in 1896, public opinion had changed to such an extent that the lease was granted on condition that some of the houses should be demolished. Now public opinion has changed further, and requires that this type of house shall be swept away. Quite right! but let the loss fall on the community whose opinions have changed, not on the unfortunate owner." While realising quite clearly the dangers of putting a premium on slum property and shoddy building, we nevertheless hold very firmly that there ought to be a cheap and an effective means of dealing equitably with each case on its merits.

York and Tramway Extensions.

AT York, if anywhere, one would expect to find an effectual fervent historical sense. Roman Emperors have lived there, and Severus died there, and is believed (perhaps eponymously) to have been buried on Severs Hill to the west of the city; and the grand old Minster, much of which was built in the thirteenth and fourteenth centuries, is a standing incentive to veneration of the works of the past. It is no wonder, therefore, that the corporation has shown itself alive to its responsibility for the preservation of the general air of ancientry which makes York historically, if not architecturally, the most interesting city in the kingdom. Tramway extensions for York are under consideration, and such projects are so commonly the signal for street-widenings and consequent demolitions, that, in this case, apprehensions for the safety of any ancient monuments that might lie on the route very naturally arose; for most of the streets within the walls are narrow and are lined with very precious specimens of mediæval domestic architecture. Thanks to the piety of the city fathers, the contour of the streets will not suffer, and the buildings will probably be allowed to stand as long as they can endure the dynamic shocks of modern traffic. Change and decay are everywhere inevitable, but may be either retarded or hastened; and we are glad to see that a strictly conservative policy which could not be everywhere recommended is recognised as being of unquestionable validity for York.

Another Paris Improvement Scheme.

A MINOR Paris improvement scheme which, as the money for it has been already voted, is likely to take effect immediately, has for its aim the clearance of buildings which render narrow and tortuous three roadways near the cemetery of Père-Lachaise—namely, the Rue des Rondeaux, the Rue Ramus, and the Passage des Rondonneaux. These are to be brought to a uniform width of rather less than 40 ft.; which is little enough in itself, but is amplitude in comparison with the present dimensions, which—especially in the case of the Passage des Rondonneaux, running at right angles to the cemetery, and, when enlarged, will, like the Passage Ramus, give a new carriageway to it—are at present barely one-third of that width. The Rue des Rondeaux and the Rue Ramus are parallel to the cemetery, the former abutting upon its north-eastern boundary. About forty houses will be either
partly or wholly removed, with immense gain
salubrity of the district, besides freeing the cer
from unsightly encroachments. It is interest
recall that the ground occupied by the famous
tery was bought in 1652 by Louis XIV., by w
was bequeathed to the Jesuits, of whom the su
was Père-Lachaise, confessor to the king; and, b
ing national property in 1790, it was laid out as a
tery in 1804 by Alexandre Théodore Brongniart
1813), the architect of the Bourse, which, with its
nade of sixty-six Corinthian pillars, is one of the
specimens of Classical architecture in Paris, as
the noisiest Stock Exchange in Europe.

Sir Henry Tanner and the Office of Works.

SIR HENRY TANNER'S retirement, after
two years' service, from the Architects an
veyors' Division of the Office of Works,
regretted not only by his colleagues and subord
but by all who have either come into personal
with him or who have been in any way intere
the work of the department which he has so lon
trolled with skill and energy. With depart
architecture, where it involves the actual des
buildings, we have but little sympathy, but our
tion to it is purely a matter of principle, as
that it tends inevitably towards the monc
repetition of certain fixed types; but, neverthel
are free to acknowledge that Sir Henry has to
extent robbed this criticism of its force. Of th
dreds of post offices erected in various parts
country during his long period of service, the
majority are void of offence, and many of the
tions have a modestly dignified character of the
Of the planning and general requirements o
buildings Sir Henry and his staff must have a
lated highly specialised knowledge of sufficien
to justify the existence of the department, and
cient volume to keep it fully occupied with wo
nobody else could do so well; whereas in mat
pure design it is only reasonable to suppos
variety, originality, and adaptation to environm
much more likely of fulfilment outside the influe
departmentalism. That Sir Henry has d
exceedingly well, in spite of the conditions, is
vindication of them, for he is an exceptional ma
in proof that, unlike the traditional hidebound
ment official, he was by no means impenetrable
nor opposed to innovation, his successful adop
reinforced concrete (of which the General Pos
in Newgate Street is, in extent at least, a mon
example), and of other of the newer materials
struction, may be convincingly cited. We are
the announcement that Sir Henry will still be
by the Government in a consultative capacity.

RAILWAY STATION DESIGN: COMPETITION.

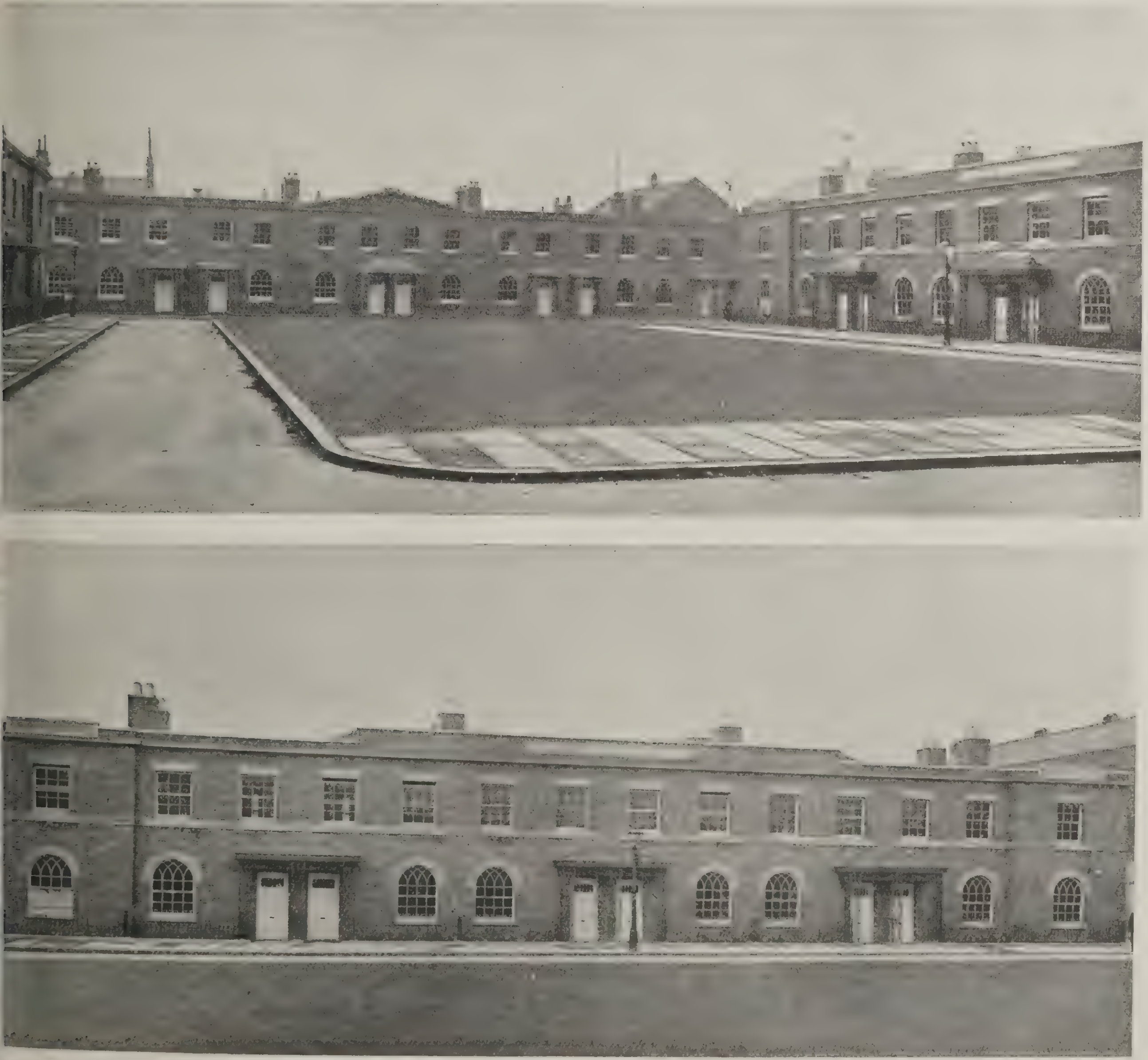
IN the course of his interesting paper on
Railway Stations, of which we publish a re
p. 157, Mr. Paul Waterhouse dealt critica
the elevation of King's Cross Station, which
same time, he thought, might be enormously in
at a very slight cost. "I would guarantee,"
"that the offer of a prize of five guineas to archi
students under twenty-five would produce mo
one good scheme for raising this elevation to
at a cost of under £500." We thank Mr. Wat
for his suggestion, and propose to test it, in
fashion, by offering a first prize of five guine
second and third prizes of two guineas and one
respectively, for the best designs for an in
King's Cross to cost not more than £500. F
ticulars of this competition, including the nam
assessor, will be published in a subsequent issu

THE DUCHY OF CORNWALL ESTATE, KENNINGTON.

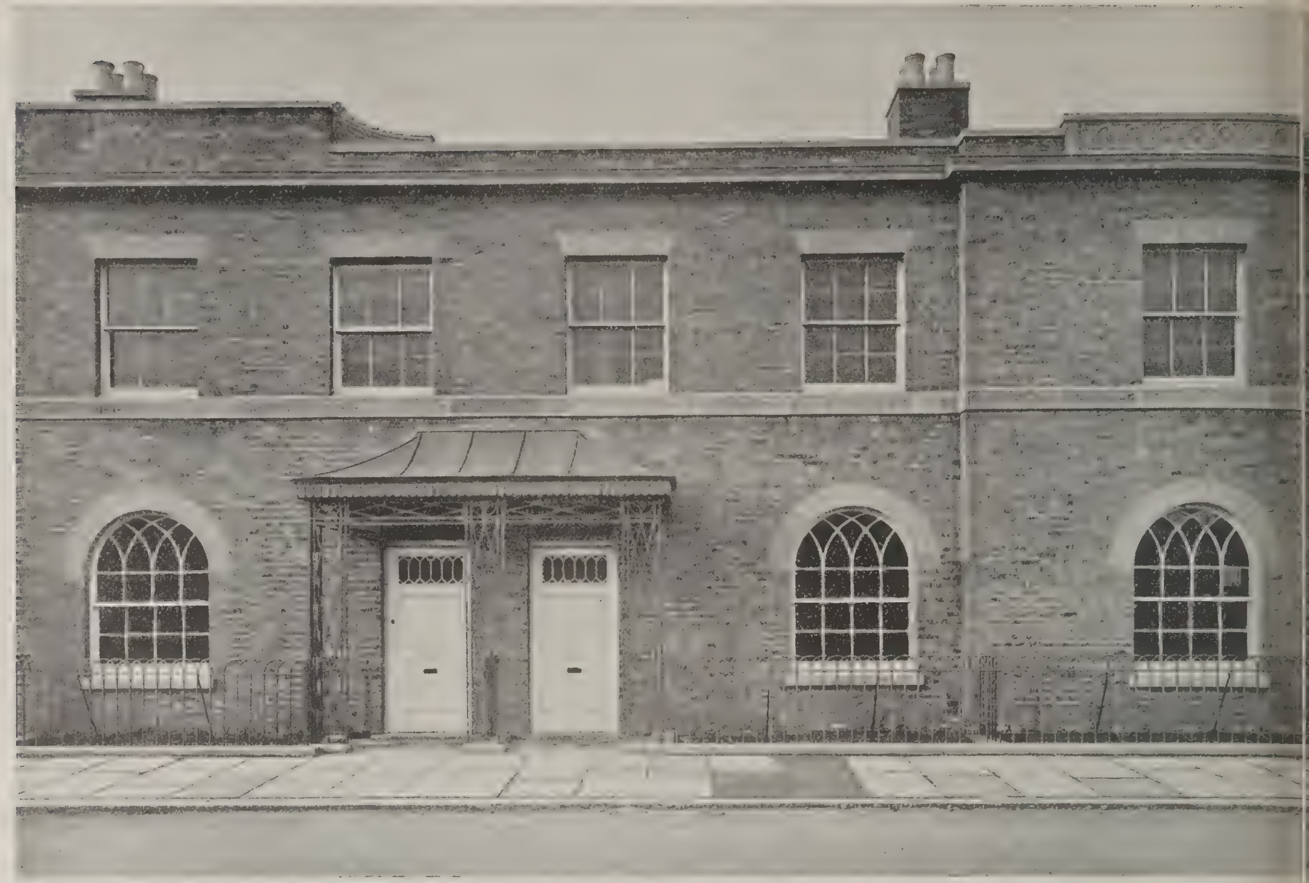
[E cottages and flats which are illustrated here have been built upon the Duke of Cornwall's estate at Kennington. They represent a part arger town-planning scheme which was initiated e present King when he was Prince of Wales. It accordance with the character of King George V. he should have shown the greatest solicitude for velfare of his tenants. Under his auspices an npt has been made to provide them with homes n should be distinguished not only for the excel- of their internal equipment, but for elegance of ure. The result that has been achieved is one which both the King and his tenants can con- late themselves: further, it is fraught with peculiar icance in that it affords an instance of a manner ilding which, now that its true character is led to us, is likely to be adopted upon numerous estates, and to find more and more favour with n populations. Thus King George, while setting ample to all other landlords in the matter of development, has also done much to stimulate portant movement in the architectural world.

e movement is twofold. In the first place, it leads revival of town-planning; the devotees of this recondite art are striving to understand the principles of civic design and to give expression to them. If they are allowed scope for their activities they cannot but exert a profound influence upon the course of architecture. Approaching the subject from a new vantage ground they are able to concentrate their attention upon the larger aspect of design. When glancing at a window their thoughts fly to the façade of which it is a part; the façade itself appears to them to be but a tiny fraction of a street; the street is considered in its relation to the city, and even this does not represent the largest unit which it is their ambition to conceive. On the contrary, they imagine a group of cities, towns, and villages, each of which represents a single note or chord in a higher symphony. It is only thus that they can pursue that most fascinating of studies which is directed to the determination of the social significance attaching to architectural forms.

The buildings at Kennington show evidence of this study. These houses are not only thoroughly domestic in character, but they are town houses. Such a result could only have been attained by architects who had an appreciation of the city as a unit and who, by taking a broad purview of both towns and villages, had been



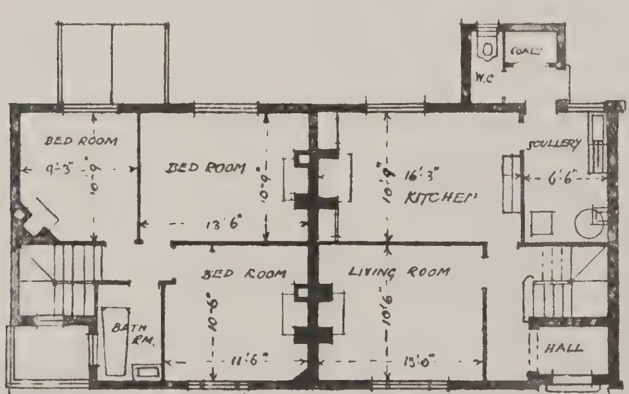
DUCHY OF CORNWALL ESTATE, KENNINGTON, S.E.: NEW SQUARE OFF COURTENAY STREET.
ADSHEAD AND RAMSEY, ARCHITECTS.



DUCHY OF CORNWALL ESTATE, KENNINGTON, S.E. COTTAGES IN NEW SQUARE OFF COURTENAY STREET.

ADSHEAD AND RAMSEY, ARCHITECTS.

enabled to distinguish between them. Would that this attitude had been universally adopted during the last century! Our towns would not then have been degraded by the wholesale introduction of houses which are not fitted to be seen in congregation; Londoners would have been spared the deplorable influx of country cottage architecture. It is a noteworthy fact that when the late eighteenth-century ideals, of which Regent Street and other grand formal schemes were the natural outcome, fell into disrepute during the Gothic revival, all buildings tended to lose their character. For the character of buildings can only be maintained when each is considered as part of a city and having its own individual value in that city. The houses in Chester Street and in the new quadrangle are domestic for two reasons. In the first place, they are unobtrusive. Private dwellings should be a foil against which public buildings appear to better advantage. Secondly, although these houses are arra
in large groups, they have not the character of
institutions; as their façades are nearly flat and of
tically the same height throughout, no particular h
asserts itself unduly at the expense of its neighb
The projected home for aged people is distingui
by a large entrance surmounted by a cupola, and
becomes a pronounced unity; this is an approp
treatment in a building whose inmates are b
together by a strong social tie. Moreover, these
town houses in that they do not present a riot of ga
they are provided with parapet walls and are
racterised by a sense of order which suggests
maturity of the civilisation which has brought
forth. A formal manner has been adopted in
instance. In periods of history when the true na
of formal architecture has been understood, it
always been employed where the site permitted
where development took place upon a large scale
is a symbol of stability—a mark of national presci
of the capacity of a race to regard its destiny with
fidence. The opinion so often expressed that th
or non-use of formal architecture is determined by
"temperament" of the individual artist will prob
be dispelled when people are led by the study of t
planning to a greater perception of æsthetic princ
In their work at Kennington Messrs. Adshead
Ramsey have resorted to a bold treatment, and
created the largest artistic units which were pos
under the circumstances. Opposite the Lice
Victuallers' building there are two quadrants of
which form, as it were, a gateway into the new
dential district. The road passing through the
also one of the boundaries of the quadrangle.
buildings in Chester Street have the same not
cohesion and scale.



PLAN OF COTTAGES IN NEW SQUARE OFF COURTENAY STREET.

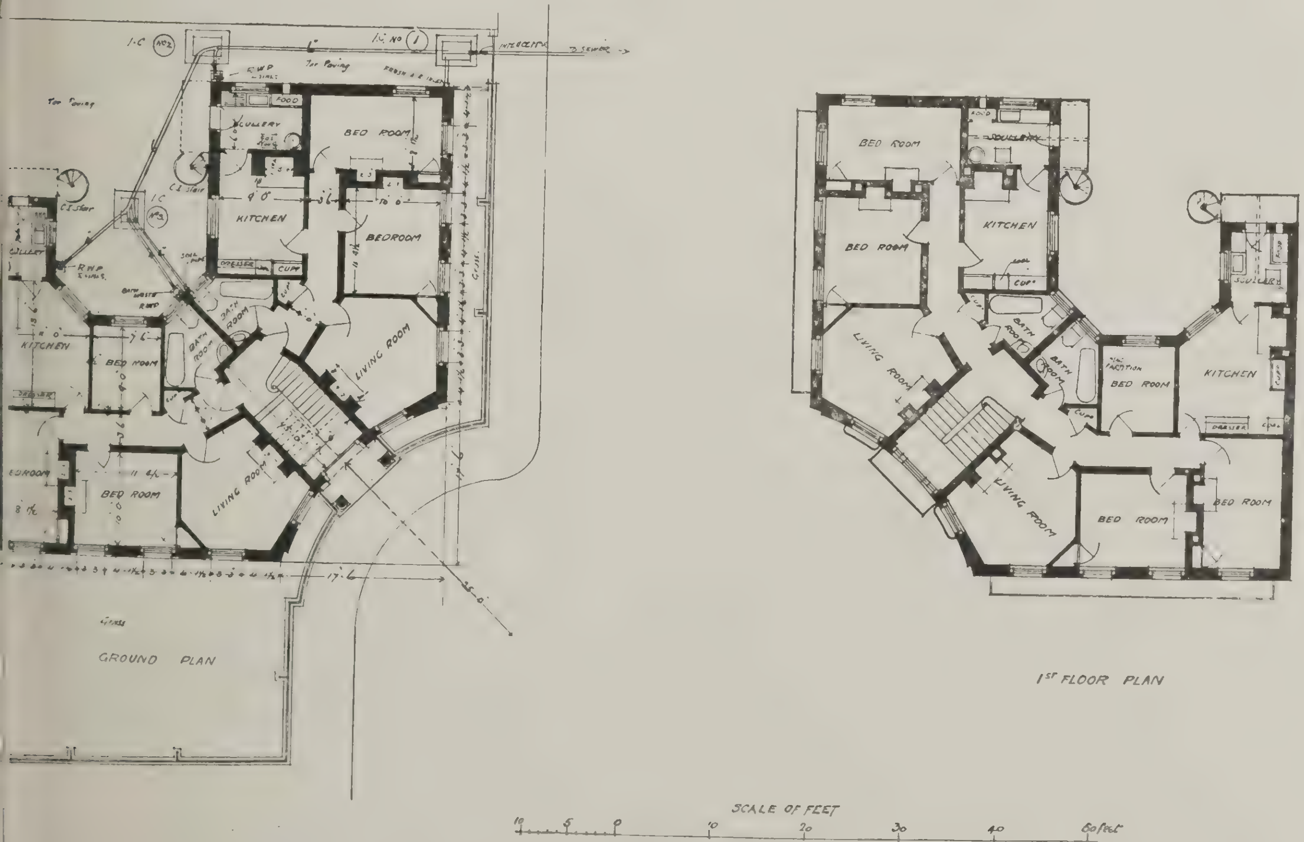
The architecture here represents the fusion of
movements. These are in reality closely allied to
another, although this might not, at first sight, ap

the case. In addition to the town-planning move- there is another tendency, also a beneficent one, ı is manifested in an endeavour to attain to a ic grace of detail and ornament. Our eyes have thing of the quality of both telescopes and micro- s. We survey wide vistas, but are also capable garding with the utmost scrutiny the little things re near to us. The subtlest arrangement of walls vindows can be rendered unpleasing by vulgar lings and coarse sculptural appurtenances. Many e hold, however, that a system of decoration owes anything to Greek influence cannot have ttributes of freshness and originality, and they se those who use the familiar motifs of column ntablature, wave-line, fret and guilloche, honey- , thistle, and palm-leaf. The most perfect con- nalisations of vegetable forms are described as t exotic features. Yet if an artist rejects these he deliberately deprives himself of some of the graceful patterns that can be produced---patterns, ver, which lend themselves to an endless variety tment. It is only by accepting decorative motifs own purity and elegance, which were evolved by gifted above all others with an acute artistic and which are devoid of any parochial character, ne architect becomes free to devote his attention se abstruse problems of composition that every onfiguration of buildings forces upon his notice. ssential for the future progress of our art that ects should not squander their energies upon the for new types of ornament. Other and more ant fields lie waiting for them to conquer.

a critic would not be displaying much discern- f he objected that the buildings at Kennington t English in character simply because their style sic and they do not remind us of what our fore- s did in the Dark Ages; and his error would be r still if he denied their originality on the ground lumns and cornices have been used before. As ter of fact, if it is necessary at all to deal in , it may be contended that the architecture we cussing is not only in harmony with many of the ghteenth-century streets in the immediate neighbourhood, but is also in complete accordance with some of the best traditions of mediæval architecture as well. Where do we find the earliest examples of the residential square? Surely in those lovely collegiate buildings, those cloisters and quadrangles which are just as much characteristic of their age as are the half-timbered work and the gables which our present Romanticists scatter in such painful profusion over the land. The Gothic Revivalists seem only to have borrowed the worst elements of mediæval architecture.

It is often wrongly held that a formal building is something essentially aristocratic in character, and that no democracy will ever call into being those larger architectural units that provide such a fine opportunity for artistic achievement. The modern democrat is supposed to cherish a spirit of independence. But however strong the love of independence may be, the love of dignity is still stronger, and people of small means who, individually, can only afford a tiny insignificant cottage will always be ready to inhabit a fine building if one is provided for them. Out of curiosity the present writer entered into conversation with some of the tenants of the cottages at Kennington and found that they made favourable comments upon their new abode. And, indeed, the first thing that strikes one about these houses is their dignity. A complete obliteration of all class antagonisms has been consummated here. It has been assumed that all citizens of this country, of whatever station of life they happen to be, "have titles manifold," and have a right to a share in the best of whatever our civilisation can give them. These cottages are necessarily not expensive, but they do not present an appearance of cheapness. They are not highly ornate; such ornament as there is, however, is expressive of scholarship and refinement. There are delicate mouldings on the windows and doors, and exquisite little cast-iron fire-grates; the staircase newels have a dainty finish. The elevations need not be described in detail, as they are shown in the photographs. In the quadrangle London stock bricks have been employed.

The work at Kennington is modern in the only correct sense of that word. But at the present moment it



F CORNWALL ESTATE, KENNINGTON, S.E.: PLAN OF FLATS, UPPER KENNINGTON LANE AND COURTENAY STREET.
ADSHEAD AND RAMSEY, ARCHITECTS.

is conceivable that their modernity will not be generally recognised. The type of person is still common who professes to find excellence in fashions and phases in the realm of art or letters which have no other merit than that of novelty. It was to such a man that Disraeli once administered a rebuke when, pronouncing criticism upon what purported to be a notable work of literature, he said, "This is a most remarkable book. It contains both new things and true things. But unfortunately the true things are not new and the new things are not true."

It is to be hoped that these buildings, so devoid of eccentricity and yet so original in conception, will exert a powerful influence upon the trend of modern architecture. A. T. E.

THE PLATES.

Rebuilding of the Duchy of Cornwall Estate: Flats, Upper Kennington Lane and Courtenay Street. Adshead and Ramsey, Architects.

MESSRS. Adshead and Ramsey's important undertaking at Kennington is discussed in the article immediately preceding. This plate illustrates their treatment of one of the corner sites, and is a striking example of the essential applicability of a quiet, tasteful Classicism to modern domestic buildings of the humbler sort.

Rebuilding of the Duchy of Cornwall Estate: Block of Flats in Chester Street. Adshead and Ramsey, Architects.

Our plate shows a terrace treatment on the Duchy of Cornwall Estate. Certain details which are commonly associated with the domestic architecture of the first part of the nineteenth century will be recognised in this façade, but there are fresh and interesting incidents, especially in the brickwork, which transfigure the scheme into a modern and individual entity.

Black, Starr, and Frost Building, New York: Façade and Detail. Carrère and Has Architects.

The name of Messrs. Carrère and Hastings guarantee of first-class work, and the fine comm building which we reproduce in two plates attra once by its note of distinction and scholarship. most good Classic designs, the façade is extr simple, even conventional, the lines of the engaged columns of the first storey being resun the third in Corinthian pilasters, framing the ta dows. The sculptural ornament under the eave again over the entrance door and its flanking wir gives all that is necessary in the way of richn effect, while not imperilling the balance and ha of the design.

Buckingham Palace: The Throne Room.

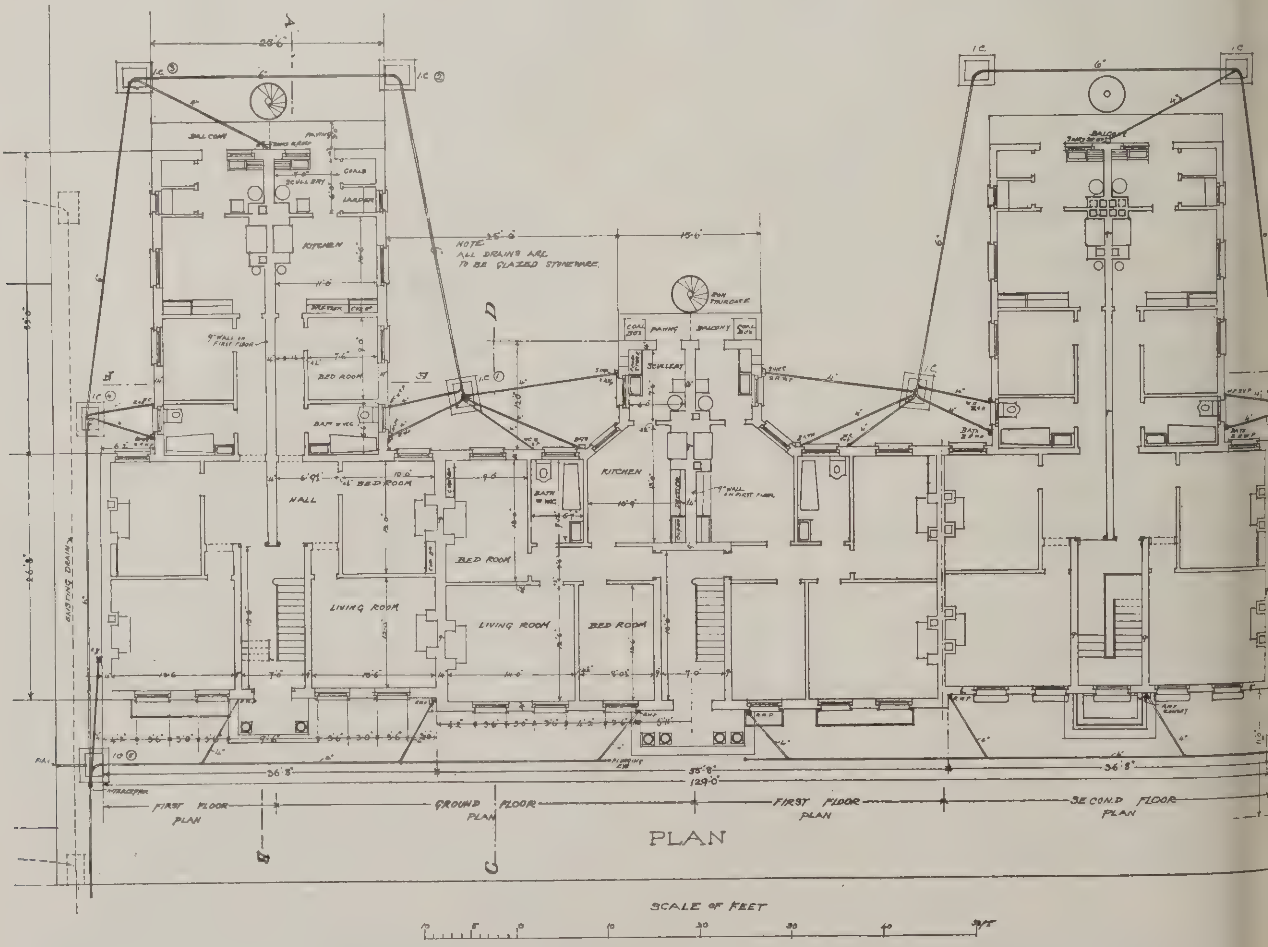
The Throne Room is one of the most sum apartments in the Palace. The ceiling is woo emblazoned with arms, and there is a white r frieze, which was designed by Thomas Stotha subject being the Wars of the Roses.

Cottingham's Designs for Ironwork: Entrance

The gates shown in this design are interestir only in themselves, but as component parts of a architectural setting, remarkable, with all its p detail, for its repose and charm. The handsome gates are quite characteristic of the artist's mas the intricacies of ornamental design.

Working Drawing: Rebuilding of the Du Cornwall Estate: Detail of Flats in Chester Adshead and Ramsey, Architects.

The working drawing reproduced in this pla plements the photographs of elevations and the of houses which accompany it either as other p as illustrations to the article on this subject. As inch detail drawing it will speak for itself.



DUCHY OF CORNWALL ESTATE, KENNINGTON, S.E. PLAN OF FLATS IN CHESTER STREET.
ADSHEAD AND RAMSEY, ARCHITECTS.

HERE AND THERE.

very thought of museums is unnerving. At
once there arises a vision of stuffy galleries spread
about with immaculate glass-topped cases filled
multitude of objects, chiefly uninteresting. The
are highly polished, and one goes warily from
case. It requires only a little of this sort of
to thoroughly weary the brain and the eye, and
capes from the place with a sigh of relief and
never to enter a museum again unless substan-
remunerated beforehand. The fault is, of
that museums are of far too general a cha-
; it is something like taking up an encyclopædia
ating it as a volume of light reading. We must
to admit that such huge collections as the British
m and the Victoria and Albert Museum do not
vithin the scope of this criticism, because nobody
senses would ever dream of touring through
nighty galleries with any intention of exploring
n detail. The only possible policy is to restrict
isit to a selected section. You can, if you will,
appy hunting-ground in the Woodwork Depart-
where you can get at close quarters with splen-
amples of Elizabethan, Jacobean, Stuart, and
eriods, but nothing but catastrophe can follow
duous visit from gallery to gallery, leaning over
nd staring at a thousand objects—here a piece
nan glass, there some armour from Agincourt;
Javan canoe, there a Gothic missal. Fail-
triction to a single section, the only alternative
sit a museum which is itself limited to one class
bit. I think the most interesting museum of this
iat I have ever seen is the Musée Galliera in
handsome building by Ginain, having only a
atively small number of exhibits—all of decora-
—grouped together in a very happy manner. It
to me that this concentration of interest is the
ing feature of such places of the Wallace Col-
and something of the same virtue can be
ed to the museum which is housed in the crypt
Guildhall. This last I will admit is a rather
e collection, with the usual rows of cases, and
overed with a profusion of objects; but it is
ed by being confined to City relics.

* * * *

Guildhall Museum contains many things which
articular interest to architects. For instance,
an exceedingly fine Roman tesselated pave-
ound some years ago 19 ft. below the present
f Bucklersbury. Then there are Roman flue
hich carried hot air from the hypocaust
out the thickness of the walls—a system of
which has recently been reintroduced under
n title. There is a splendid figure of a Roman
ound in a bastion of the Roman wall, and quite
tion of Roman building materials, while, inci-
, one notices that the Roman pick-axe was just
e as the one in use to-day. Of great interest,
the many old tavern signs which are here pre-
most of them dating from the end of the seven-
entury, like the Boar's Head, Eastcheap—a
orous fellow—the Three Crowns from Lam-
ll, and the Goose and Gridiron from St. Paul's
ard.

things are not set out to the best advantage,
are well worth looking at. Of about the same
half a dozen fine lead cisterns. The museum
ch in eighteenth-century relics, not least among
ing a fanlight grille which formerly belonged
se in the Minories. It is a very clever piece of
, displaying, interwoven, the initials of the
nd his wife; and a detail of refinement worth
connection with it is, that the scrolls taper off
near the circular eye: in modern work this is
one, the same thickness of iron being carried
out, producing a far less happy result.

Cibber's figures of raging and melancholy madness, formerly above the entrance gateway of Old Bethlem Hospital, are objects that arrest one's attention by their fearful suggestion, but they are admirable pieces of architectural sculpture, done, I presume, by the same Cibber who carved the delightful little figures which are so merrily perched on the windows of the south front of Hampton Court. Finally, there is a very comprehensive collection of old fire insurance signs. It was the great fire of 1666 which set people thinking about the benefits of fire insurance. The first company, the Hand-in-Hand, was formed in 1696; then came the Sun in 1710, the Union in 1714, and so on. The companies supplied badges to their policy-holders, which badges—first of lead and later of copper or tinned iron—were fastened on the façades. Each insurance company had its own fire brigade, with primitive appliances of the kind well illustrated in one of Hogarth's satirical pictures; and the amusing point to note is that each company confined itself to its own houses, so that the Hand-in-Hand brigade might stand looking on with secret professional joy while a Sun building was well alight, and no Sun manual was ready. Later the companies went in for a combined brigade, and the badges were then only put on buildings as advertisements. The public fire service in the City was established in 1865, after which the original purport of the devices became completely annulled. These badges nevertheless are interesting in themselves, and the Guildhall collection is well worth examining.

* * * *

We have all heard of the seafaring man ready to confound the artist with a trenchant criticism of his delineation of shipping, the man who asks what sort of a vessel ever had such rigging as this, and talks with overwhelming knowledge of halyards and top-gallants and fore-staysails. It is all, of course, a point of view. The artist is perfectly satisfied if the general effect of his work is good, and, so long as the ship looks like a ship, he will not worry over the exactitude of its details. Not all artists, however, for some men are determined to get everything correct: no cowkeeper could find anything wrong with Mr. Arnesby Brown's beasts, and it was the same with Ford Madox Brown when he worked out in the wintry garden in order to get the exact cold purplish colour of the hands for his emigrants, pensively contemplating the last of England from the stern of the outgoing ship. Some similar familiarity with the facts would have saved the stained-glass artist from the criticism of the verger. We were in a City church, looking at the windows—a bizarre lot, I must admit. I suppose they were all presentations, and the artist did his best. But it must be admitted that he has taken licences which are hardly permissible. Moses is represented seated on a marble throne, with tesselated pavement and a back-ground of marble columns that assuredly came from Venice, and there are the wise men showing him the hangings for the Tabernacle: the wise men have a look of the Chelsea Arts Ball about them, but this *en passant*. The point is, that Holy Writ says all this took place in the desert, and the surroundings would therefore be those of a super-goat's-skin tent. Nor can the artist be exonerated in his second window, representing the meeting of Saul and the prophets. The text says that he was then returning from seeking his father's asses, and that he was "a choice young man and a goodly . . . . from his shoulders and upward he was higher than any of the people": but here in this window we see him arrayed as a warrior, accompanied by his cup-bearer, and, as for stature, the prophets quite eclipse him. After all, if the artist is given a particular incident, he must stick to the text, and not make Samson a little thin on top.

UBIQUE.

BATH CITY SECONDARY SCHOOL COMPETITION.

This competition was for a mixed school to hold 250, and the assessor was Mr. Henry T. Hare, F.R.I.B.A. One hundred and three designs were sent in.

The main feature of the planning, apart from the usual regulations as to aspect of class rooms, was the condition that the assembly hall, which was also to be available as an art room, should have a north light. As to design, the promoters desired that the elevations should be faced with stone and that they should harmonise with the traditional architecture of Bath. No limit was given as to the price for the whole scheme, but competitors had to show by colour upon the plans what portions could be done for £8,000.

The site is on the Lower Common, and faces almost due south, towards the Upper Bristol Road. At the back is the Royal Victoria Park. It measures approximately 273 ft. from north to south and 240 ft. from east to west. There is a fall in the ground of 1 in 11 ft. from north to south, with a cross fall of 1 in 37 ft. over the upper half of the site.

Agreeably with the condition as to the assembly hall, nearly all the competitors made this the main feature of the back, or north, elevation of their design.

The fall of the ground being so considerable, it was necessary either to arrange the school in two storeys by the use of additional internal stairways, or to make a building of three storeys. About half the competitors adopted the one method and half the other, while Messrs. Cleland and Hayward, of Wolverhampton, had shown an interesting plan all on one floor, in which, however, the levels of the site had not been seriously taken into consideration.

Many of the designs showed a through corridor from east to west on the north side of the class rooms and directly lighted, while others had adopted a central corridor with rooms on either side, the objection to the latter being that lighting was only possible by small windows just below the ceiling level. Some few of the competitors had arranged their rooms around a large internal court-yard with an open corridor.

The winners of the competition are Messrs. Hickton and Farmer, FF.R.I.B.A., of Walsall, who show a compact plan of three storeys, with the domestic economy and manual training rooms, cloak rooms and lavatories all in the basement. On the ground floor are five class rooms, physics room, library, head master's and head mistress's rooms, and the assembly hall, the latter acting as a passage-way between the east and west sides of the building. On the upper floor are four class rooms, chemistry room, and assistant masters' and assistant mistresses' rooms, there being a connecting gallery across the upper portion of the assembly hall. It will thus be seen that the compactness of the plan is largely obtained at the expense of the privacy of the hall or art room. The style is a very free rendering of the present vogue of Neo-Grec. On the ground floor under two high round-headed windows, which flank the central portion of the building and light the staircases, are the entrances for the staff, while the boys' and girls' entrances are in the basement. The two upper storeys are priced out at 7d. a foot cube, the foundations and basement at 6d., the walls and excavations at 3½d., and the heating at £300, making a total of £7,997. It is not quite clear what is intended by the price named for the walls and excavations. Under this method of pricing the winners have managed to include almost all the accommodation asked for.

The second design, which wins the premium of 50 guineas, is by Messrs. McKewan and Madeley, AA.R.I.B.A., of Birmingham. The building is contained in two storeys with a central corridor running the whole width of the building and with the boys' and girls' entrances at the extreme ends, which are common also to the staff. The elevation of this design contrasts strongly with the last, the ground floor being rusticated throughout and having round-headed windows, while rusticated pilasters are carried up to the roof line. The elevation is finished with a parapet and a low roof behind, the corridor at the back having a flat over it. By cubing their building at 6¼d., these competitors have been able to include the whole of the requirements with the exception of the manual training room, domestic economy room, and gymnasium, at the sum of £7,985. Insufficient notice has, however, been taken of the ground levels.

An elevation more in accordance with the traditional architecture of the city is that of Messrs. Munby and Chetwood, of London, who also have a good practical plan with a central entrance to serve for the staff and as access to the assembly hall, in addition to separate entrances for the scholars at the east and west ends. These competitors have priced out their building at an average cost of 8d. per foot cube.

Mr. A. Saxon Snell, of London, shows a good eighteenth-century design, but a defect of the plan is the inclusion of the assembly hall in the main corridor.

Others who have shown designs conformable to local type and whose planning is also good are Mr. J. C. D. Davies, of Swansea, and Messrs. Thornely, Rooke and Barrow, of Plymouth, the elevations in the latter design being particularly well conceived at the east and west ends.

Messrs. Hudson and Abbott, Upper Norwood, show a remarkably good three-storey pile in Neo-Grec.

It was extraordinary to note the vague idea which some competitors had as to price, which varied from 5d. to 10d. per cubic foot, with consequent complete schemes of £8,000 to £15,000. With such plain conditions as to requirements, surely some more reasonable estimating might have been expected. There is no doubt at all that the value of the full scheme as set out by the promoters is approximately £12,000.

SOUTHWARK BRIDGE.

A considerable advance has been made with the preliminary work in connection with the reconstruction of Southwark Bridge. The City Corporation having decided that the bridge should remain open for passenger traffic during the whole period of rebuilding, the first proceeding has been to provide temporary footways 8 ft. 4 in. wide on both sides of the old structure. To carry these footways it was necessary to arrange for independent foundations, as the old piers are to be removed. These foundations, which consist of timber piling, also carry the weight of the overhead cranes and staging and cross-girders which the contractors, Messrs. Sir William Arrol and Co., have had to install for the purposes of the work. There are three travelling cranes of ten tons capacity and 84 ft. gauge on the temporary bridges, which have also been used to carry the hydraulic, electric, telephone, and other mains temporarily diverted during the process of rebuilding.

THE GENIUS OF BODLE

Mr. Edward Warren, of Lo
delivered an eloquent appreciation
genius of George Frederick Bodle
former master, before a large gath
of the Birmingham Architectural
ciation on February 20, when the
dent (Mr. G. Salway Nicol) was i
chair. Mr. Warren remarked tha
family and social connections o
Bodley were such as to bring him rep
professional opportunities, chiefly
siastical, and his marked success i
handling of each rapidly brought an

From beginning to end, before and b
all things, he was an idealist. Whe
thought of the formal baldness, the st
finished Gothic of the average churc
the fifties and the sixties—Gothic r
indeed, but not revivified—the refine
the grace of proportion, and the m
of detail shown in Mr. Bodley's early
gave him easy predominance over a
a very few of his contemporaries.
natural comparison that arose was
Butterfield, Pearson, and Street, th
two his seniors, the last, he (Mr. W
thought, slightly his junior. It was
ever, with Butterfield, for whose wor
Bodley always expressed warm admi
that the comparison became nearest.
two men, indeed, resembled each ot
ideals, and to some extent in archite
manner. Both had a predilection fo
interiors, both had a fine sense of li
proportion, both had a strong ap
tion of fourteenth century Gothic, b
their earlier work cultivated a severe
ment, and both foresaw and prepare
in designing their churches, the ul
colour scheme and decorative finish
whole. In regard to the decorat
interiors they differed widely in
and method, but there was a latent
in the work of both. Butterfield wa
to rely chiefly upon the native colou
materials—stone, brick, or marble
minor assistance from applied deco
Bodley, while delighting in the fine
of dressed stone, cared little an
increasingly less for exposed brickw
interiors, and prompted by his acu
sensitive colour sense, revelled fro
first in the use of paint and of gildin
roofs, walls, and woodwork, and was
content with a church until he had b
the whole interior into harmony as
ceived it, a harmony which govern
whole design and its furniture down
minutest detail of glass, metal, or
work. Marble he almost never use
church except for floors or for an
sional font. Bodley's strong leani
always towards Gothic. It was a ma
faith, of profound personal convic
conviction which strengthened
deepened with advancing years,
which, to the end of his long life, he
wavered. Mr. Bodley was not
master of his art, but excessively
ful; he permitted nothing and nob
interfere with his intentions. In the
ing out of a design he had set his
on he was obstinate, nay, obdurat
he always ended by getting his own
the long run, and the run was som
a matter of years. He (the speake
heard it confidently stated that
could not draw—a most absurd stat
Bodley regarded drawing for an ar
as solely a means to a definite en
realisation of his design, and to t
his drawing was always adequate.
neat and finished drawings he had
regard, and no patience in his late
for their preparation, but his planni
quick and accurate and his surene

facility in detail drawing were
shing. He sketched in his cheque
and was known to have filled his
pass-book with notes and sketches.
d an extraordinarily fine sense for
, and hated a weak or a flabby one.
them nervous," he told one. Of
g generally, as applied to architec-
e used to say we all draw too much,
hat, with one vernacular style and
en who understood it, hardly any
g would be necessary. In placing a
g in a street or in contiguity to
, he was always careful to do no hurt
environment. "You must consider
neighbours," he said; "you've got
a gentleman in your art." He (Mr.
n) would never forget the enthusiasm
Mr. Bodley inspired, or the effect
personal influence. He had an old-
ned stately courtesy which very well
e him. The speaker gave two
ces of his ready humour. On one
n one of his pupils, who was not
impressed by anybody, thought Mr.
had taken his notion for a lectern
mething in a book. "I know where
t your lectern from, Mr. Bodley,"
id. "Yes, the ass knoweth his
's crib," promptly replied Mr.
. At St. Martin's Church, Scar-
h, some people commented on the
painted pulpit done by Rossetti.
they said, "it is Chinese. Just like
hest." "Very well," remarked Mr.
"let's write upon it *Tutores—*
teachest." In concluding his fine
, Mr. Warren remarked that Bodley
altered from his ideals; he had ever
urage of his opinions, his en-
m and his energy endured to the

DON RAILWAY STATIONS.

UL WATERHOUSE, M.A., F.R.I.B.A.

ndon's Great Terminal Stations"
e subject of Mr. Paul Waterhouse's
at last week's meeting of the
. There were, he said, 299 rail-
tions within the Metropolitan area,
proposed merely to offer some con-
ons relating solely or chiefly to the
termini, of which we had a dozen:
, King's Cross, St. Pancras, Liver-
reet and its ally Fenchurch Street,
g Cross and its Cannon Street ap-
e, Victoria, London Bridge, Pad-
, Marylebone, and Waterloo.

terminal stations of London were
ts at which the greatest city of the
best country gave its welcome to
rld at large. Perhaps, therefore,
t thought which arose in contem-
them was the question, "Do these
ers give their greeting in terms
of the city that they represent?"
a rule of hospitality that, at the
ld, we should show to coming and
uests a fervour at least as warm
steem in which we held them. In
stom bade us go farther, and we
ot considered hypocrites if to the
and departing stranger we
ated the true degree of our regard.
ared we must admit that London
d to enhance the climax of its hos-
by showing to the approaching pil-
ss cordiality at the outset than it
d later on, and that the retreating
often found the pangs of separa-
dified by the sense that stole over
ring the final ten minutes of his
t, after all, London was a fairly
d inhospitable spot.

Having admitted these things, he was not intending to suggest either that all our termini were disgraceful or that even the less comely stations were without some justification for their uncomeliness. He was merely wishing to point out that, although in railway stations, as in other things, London had paid the penalty which fell upon pioneers—the penalty of being too easily outpaced by its successors—there was for railway stations, as for all products of human contrivance, an ideal which was worth the seeking.

Euston came first, being the terminus of that ancient London-to-Birmingham line which marked the earliest beginning of the steam approach to London. To Euston he did homage. There was nothing mean about Euston's birth. The London and Birmingham Railway meant big things from the very beginning. It was true that for years after the inauguration of the line the trains were brought from Chalk Farm to Euston by traction, not by locomotives, owing, he believed, to the diffidence of Parliament. But Euston Station was meant to be, and was, worthy not only of the great movement thus initiated, but of its future. That noble hall and the splendid Doric portico (since outraged by encroachments) bore a ratio to the line then existing glorious out of all proportion when compared to any subsequent displays of London railway architecture. The platforms and their roofs certainly were an anti-climax, but Euston was setting its house in order, and it was not fair to judge of the station by its present condition.

The glazed roof problem was a difficult one, and it could not be said that in this matter we had always gone from good to better. St. Pancras, one of the earliest, was still, to his mind, far and away the best. Sir Gilbert Scott, in the full blast of Gothic energy, astonished the railway world with a quasi-mediæval external elevation, and the engineer, far from letting him down with a disappointment, played up to him in an extraordinary manner. Instead of designing a commonplace truss and decking it with scraps of ecclesiastical castings, he made the discovery that a giant pointed arch, with a concealed tie beneath the rails, was the form best suited to his needs. The resultant effect was amazing. He had no hesitation in acknowledging that for grace, beauty of form, and sheer magic of fitness the iron and glass roof of St. Pancras gave him unqualified pleasure. It had an élan and charm which would be convincing even if it were, as he once thought it was, a bit of sacrifice to Gothic etiquette—but when one discovered that it was no mere concession to style but an example of direct, untrammelled engineering skill, the respect due to it was spontaneously given.

The only completely new terminus built under the eyes of the present generation was Marylebone. To it they must look for London's latest utterance in station craft, but they looked—with disappointment. It was conceived and born under the ægis of that mischievous theory that, if only the street front of a station was masked by an ostentatious hotel, the station proper (or improper) could be left to the engineer.

Paddington was a bad shot at the beauty target, but at least it was a shot. Wyatt was called in, and perhaps Wyatt failed. His affectation of the Moorish mode was unhappy—but it was well intentioned. There was certainly a grandeur in the big arcuated spans of glass roofs, which were worlds removed from the timid and prosaic horizontality of our later efforts. Paddington, again, almost entered the region of romance from its enshrinement in Frith's picture.

King's Cross might be named after Landseer's picture, "Dignity and Impudence." One could hardly find among the street sights of London a more striking combination of vigour and debility than the south elevation of that terminus. In the sheer strength of direct purpose the engineer flung up those two Cyclopean arches, and in between them he set out to design an architectural climax which should unite and crown the whole design; the result was failure—he turned his drama into a farce. He would guarantee that the offer of a prize of five guineas to architectural students under twenty-five would produce more than one good scheme for raising this elevation to nobility at a cost of under £500. But why, he wondered, had King's Cross forgotten all this time that it had a forecourt—or, at least, a foreground? For many years this rather shapeless but valuable site was dedicated to the display of rustic seats and summer-houses, the wares of some favoured merchant. At last, when tube railways came into use, they were made aware of the prospect that this fruitful field would give birth to a little pink stationette. The stationette arrived, rather pinker than they expected, but it evidently took everybody by surprise, for the position which it assumed bade defiance to any possible scheme for laying out this open space in some sort of relation to the great building behind it. He confessed he was amazed.

Charing Cross succumbed (as regards its glass and iron roof) to premature decay, and was rebuilt in the manner which he was still unwilling to regard as the last word in the steel artist's vocabulary of beauty. Cannon Street still maintained, when viewed from the river, an almost picturesque suggestion of one of the minor entrances to the Infernal Regions.

To Holborn Viaduct he would be generous and forget its existence. He had always admired the architecture of its hotel front to the street, but as a station one could only say of it that it was quite conspicuously inglorious.

Protesting against the "spiritless expediency" of modern railway stations, Mr. Waterhouse said he regretted that railways and steam were not invented in the time of the Romans. There could be no doubt that if this had been the case the Romans, true fathers of our European economy, would have left us a lesson in the laying out of railway routes; little doubt, also, that some of their actual railway stations would remain. A railway station would at least wear as well as a basilica or a public bath. Here and there over the Continent of Europe—perhaps even on our own island plot—there would still be standing vast majestic piles of monumental masonry serving at the present day the very purpose for which Rome had reared them. The advantage to us would be immense, for not only should we find in them that ancient sanction without which we, as architects, were so often timid, but also, and conversely, we would be rid of the excuse which was supposed to justify the deformity of all architecture connected with distinctly modern needs.

Waterloo, continued Mr. Waterhouse, the modernisation of which was rapidly approaching a measure of completion, had a good chance, which for a time at least it missed. The terminus to the South-Western was once a rather stately little station at Nine Elms, the front of which was reminiscent of the portico of Sadler's Wells Theatre. When Waterloo superseded this unassuming erection it had to grapple with the problem of the high level roadway. The first Waterloo was a very poor and mean affair. But recent years had shown a very hearty development, and the new station had about it many of the elements which one hoped to see in the station which was aware of the dignity due to its size.

It was obvious that whenever a railway line made up its mind to enter the heart of a metropolis it must do one of three things. It might, for example, come in on the level, in which case it either obstructed existing streets and roads or threaded an ingenious track through a roadless region. Euston was on the level, and solved some of its difficulties by frank obstruction, others by diving under the primrose roots of Primrose Hill.

In default of coming in on the level it might sink below the general surface in a cutting. This was Paddington's idea—it was also the device adopted at Liverpool Street. But the measure was only a half measure, and the roads which crossed the railway outside the station had to climb for the necessary bridge height. The third course, which was adopted by nearly all the South London lines, was a courageous policy of overhead travel, necessitating miles of arched and bridged causeway.

It could not be said that these long rows of arches had added to the beauty of the Surrey side, though he imagined that in a ruined London some centuries hence they might possess a pictorial and antiquarian interest not unlike that of the aqueducts on the Campagna. It was this high level device which made possible the crossing of the Thames at Charing Cross, Blackfriars, and Southwark.

There was, of course, a fourth expedient, not yet adopted in London, which he might call the policy of the Quai d'Orsay. In idea this was splendid—it was partly splendid in execution. The trains were kept below ground, the booking offices, waiting halls and administrative quarters being all on the street level. Thus space was halved, or nearly halved, and the upper level departments gained greatly in dignity. But the train platforms suffered in light, comfort, and convenience. Moreover, it was impracticable to have steam engines employed in these basement domains, and it became necessary to exchange steam for electricity at a point outside the underground portion of the route. Whenever, and if ever, all trains were run by electricity, this device would no doubt grow in favour.

Victoria, again, was a notable instance of reconstruction. The gentleman who designed the blank wall in Buckingham Palace Road did it right nobly. It was true that Victoria's iron roofs, though lofty, were uninspired, but the really worst fault of the station was its inordinate length. The lack of width had to be compensated for by forward extension, with the result that the distance from the booking office to the railway carriage was in many cases immense. A wider station farther to the south-west would really have been more satisfactory.

Liverpool Street was also a monster, but it got over its difficulties by lateral expansion.

The stations at London Bridge were relics of the intermediate barbarism between the prophetic courage of Euston and St. Pancras and the mean modernism of St. Marylebone.

The greater part of the remainder of Mr. Waterhouse's paper was devoted to the consideration of the south side of the Thames as suitable ground for railway termini, to the refutation of the idea of one great central station for all railways, and to the explanation of a scheme of underground railways, roughly oval in shape, touching the majority of the twelve termini at present existing. The oval was intersected by two diagonal routes, one connecting Paddington with Liverpool Street, and the other Victoria with King's Cross.

A vote of thanks to Mr. Waterhouse was proposed by Mr. H. V. Lanchester, seconded by Mr. Frank Potter (general manager of the Great Western Railway), and supported by Mr. H. H. Statham, Mr. G. A. T. Middleton, Mr. Edward Warren, and Mr. Charles Morgan (engineer to the London, Brighton and South Coast Railway). Mr. Waterhouse briefly replied.

WREN'S CITY CHURCHES.

Mr. J. M. W. Halley prefaced his lecture at the Camberwell School of Arts and Crafts, on February 12, by referring to the steady growth of the Palladian styles in England prior to the time of Wren. The new style overcame the old by slow degrees, creeping first into the delicate ornaments of architecture, changing the flat Tudor arch into a lintel or a true Roman arch. In reality the Renaissance culture meant a new mode of life, full of new amenities and delicacies—indeed a new sanity of living. Architecture was affected. The old mediæval builders were empirics, men without science. The new race of architects were to be scholars and men of science, and in so far as architecture is susceptible to the impress of the individual it was to be henceforward stamped by personality. But although its spirit was changed, the actual methods of building remained the same. It was usually assumed that the fine race of mediæval workmen passed away with the withering of the mediæval spirit. That it did not is evident from the example of St. Paul's and the City churches, where all the trades appear in great perfection. In the latter half of the seventeenth century the Plague of London and the Great Fire were the two events that made it necessary for the churches to be rebuilt. St. Paul's and eighty-six parish churches lay in ruins, and innumerable houses had totally disappeared. Old London, with exception of the churches which were built of stone and brick, seemed to have been a town of wood, and so subjected to the continual ravages of fire; there had been a most destructive conflagration in the reign of William the Conqueror, when the first Cathedral Church of St. Paul perished. Yet the same manner of building was persisted in till the Plague and Fire of 1666. Not only was wood the common material of building, but the houses with their overhanging gables almost touched one another in the narrow lanes and streets, inviting plague and fire. One hardly regretted the Great Fire, as it was the means of giving us a healthier, more beautiful London, yet much that was beautiful perished at that time. Immediately after the Fire Wren made an exact survey of the ruins, and made a plan for a new and magnificent lay-out of the City, which unfortunately was never carried out. However, the City still had to be laid out without too much deviation from the old lines of the streets, yet with widened thoroughfares, and the claims of endless freeholders had to be adjusted. When rebuilding was begun, the lack of workmen necessitated the passing of an Act of Parliament giving to "foreign" workmen—*i.e.*, provincial carpe
bricklayers, masons, etc.—the same
of working as that enjoyed by freem
the City, and that having wrough
seven years they should contin
enjoy that freedom for the re
their lives. Before beginning his w
St. Paul's Wren consulted the
eminent masons in England as to th
stone to use. Mr. Halley went on
with the work of the Strongs, and p
out that Edward Strong was one of t
men who saw the beginning and end
rebuilding of St. Paul's. It was imp
to speak of Wren's churches withou
tioning St. Paul's, for the former w
erected during the thirty-five years oc
by the rebuilding of the Cathedra
many of the men engaged on the Cat
were also engaged on the churches.
attainments in experimental scienc
as considerable as those of any man
time, but his natural ability was s
to be capable of understanding eas
new object that was congenial to
tellect. He was profoundly influen
Bernini and the Baroque, and the
more in his work that was akin
Baroque than to the art of P
Wren's churches never obtained th
dignity of the latter's, but they po
a wonder of their own. With re
the churches, domes of various shap
them their peculiar character.
mind seemed never to have tired
search after variety, and at the sam
fanciful expression, not only in the
of his churches, but perhaps mor
his spires. It was pleasant to dwell
fact that Wren, when for the last
was hoisted in his basket to the sun
St. Paul's, saw these churches i
manifold diversity—like white
flowers among the red roofs of Lo

INCORPORATED CLERKS
WORKS' ASSOCIATION
DINNER.

The thirty-first annual dinner
association was held at the King'
Holborn Restaurant, on Februa
under the chairmanship of Mr. H
feild Clarke, F.R.I.B.A., V.P.S.
was supported by a large num
architects, surveyors, builders, and
including: Mr. Paul Waterhouse
William Pite, Mr. W. Woodward,
Corderoy, Messrs. Stoner and Sons,
Holloway, and others. The toast
"The King," "The Architects a
veyors," "The Worshipful Com
Carpenters," "The Builders," "Th
porated Clerks of Works' Assoc
"The Chairman." In his respons
toast of "The Chairman," Mr. C
Clarke briefly outlined the history
Association, stating that it was
in 1882 and became incorporate
years later. He had been r
of the fact that his fathe
late F. Chatfeild Clarke, had pre
their annual dinner twenty-eight ye
and he himself was pleased to
association was in such a health
tion, and that their efforts in esta
a benevolent fund had been so far
ful. Funds were still needed to
those efforts, and it would encou
members of the Clerks of Works'
tion to hear that the gentlemen
supported him during the evening
erously promised to help in that d
He wished them prosperity in th
and thanked them most sincerely
viting him to preside.

The dinner was attended by a
far exceeding that of any previous

SANATORIA CONSTRUCTION: NEW L.G.B. MEMORANDUM.

" Memorandum on Provision of New esidential Institutions for the Treat- of Pulmonary Tuberculosis," issued bruary 13 by the Local Government , and signed by Mr. Brook Kitchin, ect to the Board, and Dr. Arthur olme, Medical Officer to the Board, plained that in a previous memoran- dated February 25, 1913, it was in- d in a general way how inexpensive rium accommodation for tuberculous is could be erected within a compara- short period in order to meet any g need in a particular locality, and he present memorandum has been ed with a view to affording local rities and others further assistance in ovision of special residential institu- in connection with permanent es for the treatment of pulmonary ulosis. The unit taken in setting e details has been 100 beds in build- with ten additional beds in shelters, ference is made to institutions con- g a larger number of beds.

Economy in Building.

reparing this memorandum, economy en borne in mind throughout, but, it ieved, without any sacrifice of effi- . The cost of an institution—apart he cost and the character of the site nds primarily on its planning; after the character of the materials used construction. The local circum- s must be taken into account in de- ing the choice of building materials.

Site.

he selection of a site the most im- t considerations to be taken into it are: (1) Area. (2) Elevation in n to surrounding country. (3) fulness of outlook. (4) Protection certain winds. (5) Subsoil. (6) age facilities. (7) Water supply. nvenience of access.

The area of land required for the site epend upon the number of patients e type of cases.

site of a sanatorium should be suffi- large to permit of open-air employ- of a considerable number of patients. lesirable that a site of 50 acres in should be provided for 100 patients l is readily available and the cost is ut an area of not less than 20 acres may suffice for this number of patients where suitable land is difficult to obtain or the cost of land is high. It is desirable that in all cases an area of at least one-fifth of an acre should be allowed per patient.

(2), (3), and (4) The site should preferably slope gradually to the south and be protected on the north and east by high ground, preferably wooded. In some districts protection from westerly and south-westerly gales may be desirable. The site should be moderately elevated above the country lying to the south of it.

(5) The subsoil has importance, not only as regards dampness or dryness, but also because the cost of building may depend somewhat upon its character. The main consideration is that the site should be dry. This must be secured if necessary by proper drainage, but a site requiring extensive drainage should, as a rule, be avoided.

(6) If drainage into a public sewer is impracticable, the site should be suitable for the provision of an adequate sewage disposal system.

(7) It will be necessary to ascertain that an abundant supply of pure water is available.

(8) The site should, if possible, be within easy reach of a railway station. The cost of carriage from the station to the site will form an important factor, not only as regards construction, but also in the subsequent maintenance of the institution. There is the further consideration that it is undesirable that patients who are acutely ill should be unduly remote from their relatives.

Buildings.

In residential institutions for the treatment of pulmonary tuberculosis the following provision will be required: (1) Patients' sleeping accommodation. (2) Kitchen, dining hall, and offices. (3) Staff block containing quarters for resident medical officer, matron, and staff. (4) Out-buildings, including laundry, boiler house, disinfector, sputum destructor, mortuary, etc.

General Considerations as to Accommodation for Patients.

As the planning of the institution will depend on the stage of disease of the tuberculous patients proposed to be admitted to it, it is necessary to set out a classification of cases of pulmonary tuberculosis arranged from the standpoint of accommodation in residential institutions.

Group A.—Cases in which permanent improvement or recovery may usually be anticipated.

Group B.—Cases in which only temporary, though possibly prolonged, improvement may be anticipated. Such cases will include: (1) Patients who may be expected to recover considerable ability to work, as a result of protracted treatment. (2) Patients admitted for a short term for educational treatment. (3) Patients with advanced disease, many of whom improve greatly under institutional treatment.

Group C.—Advanced cases requiring continuous medical care and nursing.

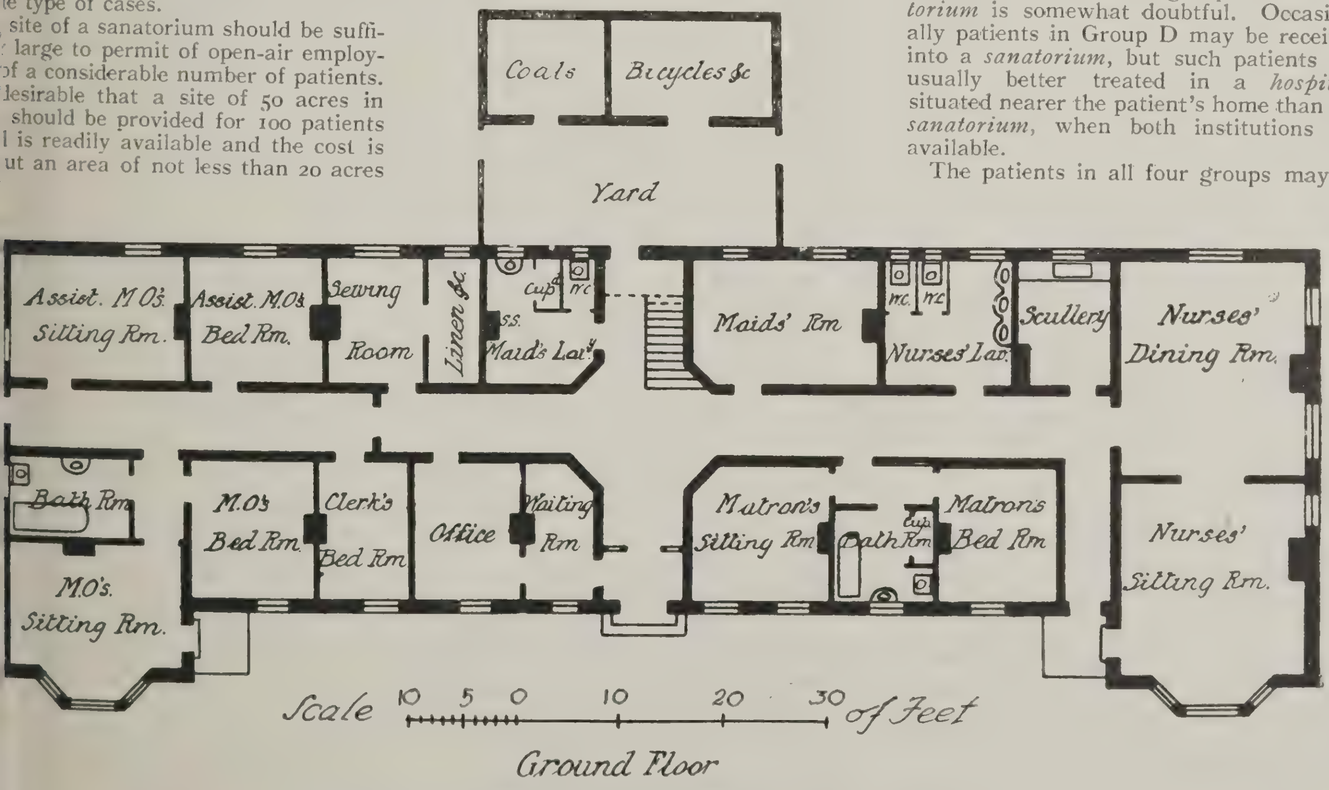
Group D.—Cases requiring special observation. (1) Patients admitted for the purpose of diagnosis. (2) Patients needing to be watched, before the best form of continued treatment can be determined.

" Emergency " cases, *e.g.*, patients with hæmoptysis, etc., may come within any of the above groups.

For the sake of clearness, the term *sanatorium* is used hereafter to indicate an institution mainly devoted to the reception of patients in Group A, the term *hospital* to indicate an institution provided for the reception of patients in Groups B, C, and D, and the term *combined institution* to indicate an institution devoted to the reception of patients in all four groups.

Very commonly, however, patients in Group B (1) are treated in institutions intended for patients in Group A; but the advantage of the protracted treatment of patients in the former group in a *sanatorium* is somewhat doubtful. Occasionally patients in Group D may be received into a *sanatorium*, but such patients are usually better treated in a *hospital*, situated nearer the patient's home than the *sanatorium*, when both institutions are available.

The patients in all four groups may be



PLAN FOR TUBERCULOSIS SANATORIUM: STAFF BLOCK.

treated in a *combined institution*, in separate rooms or pavilions. This arrangement is most suitable for areas with a population too small to require the provision of 100 beds for patients in Group A. A *combined institution* should be so situate as to secure fairly easy access of relatives to patients acutely ill, while giving good local conditions for patients in Group A.

Children's Pavilion.—If it is desired to make provision for children, whether on the site of a residential institution for adults or on a different site, the Board of Education should be consulted.

Sleeping Accommodation for Patients.

The sleeping accommodation provided in residential institutions for the treatment of pulmonary tuberculosis is commonly of one or more of the following types:

I., single-bedded rooms; II., two-bedded rooms; III., beds on both sides of a ward as in the ordinary isolation hospital; IV., shelters.

I.—Single rooms are often desirable for patients who require a considerable amount of nursing, whether in Groups A, B, or C. These rooms should be situated in the special nursing section. Single rooms may also be required for patients in Group D. The rooms for patients in Group D need not all be situated in the special nursing block.

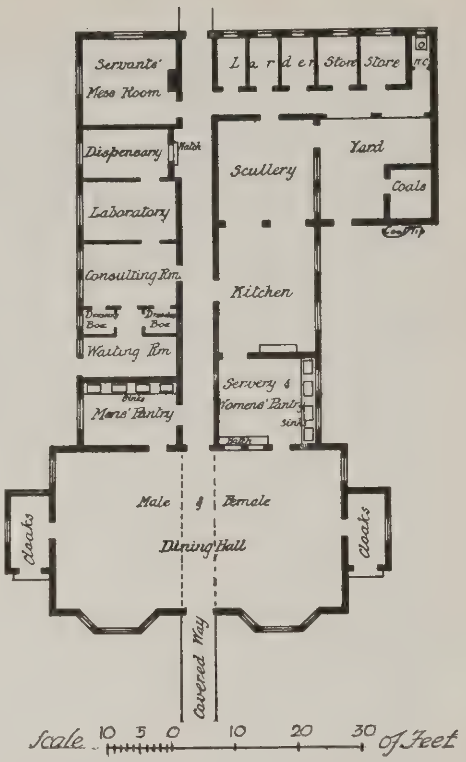
II.—Two-bedded rooms are suitable for all types of patients with the exception of the cases referred to above for whom single rooms are required.

III.—Wards will generally be found useful for patients in Group B who are able to be up and about all day. They may also be used for some of the patients in Group A. If the wards are situated near a nurses' duty room they may also be suitable for patients in Group B who require only a limited amount of nursing, and are not sufficiently ill to make the use of single-bedded rooms desirable.

IV.—Shelters, single or double-bedded, are suitable for patients in Groups A and B who are able to be up and about all day. Single-bedded shelters may also be useful for doubtful cases sent for diagnosis (Group D (1)) and for training patients with a view to the subsequent use of shelters at home.

Shelters.—Owing to difficulties in supervision and administration it is undesirable to have a large proportion of the sleeping accommodation in shelters, and as a rule provision of this kind should not exceed 10 per cent. of the total accommodation. Electric bell communication should be provided between each shelter and the nurses' duty room. These shelters may be used for training patients, about to leave the sanatorium, to sleep in shelters after their return home. It is desirable, therefore, that the shelter used should be simple in construction, and similar to those lent out for use at home.

In deciding upon the kind and the proportional amount of the different types of sleeping accommodation the following general considerations should be borne in mind: (1) It is desirable that patients in different stages of disease should as far as practicable be treated in different wards or rooms. (2) It is desirable, in order to secure adequate and continuous attention to patients along with economy of staff, that, so far as practicable, all patients requiring special nursing should be treated in a section of the institution devoted to this purpose. (3) Subject to the foregoing considerations there is no administrative or other difficulty in having patients in different stages of disease in the same pavilion.



DINING HALL AND KITCHEN BLOCK.

The term "nursing section or pavilion" is used throughout this memorandum to refer to that portion of the institution set aside for the treatment of those patients who are not able to be up and about all day but require a certain amount of special nursing or supervision, and the term "convalescent section or pavilion" to that portion of the institution allocated to patients who are able to be up and about all day and to take all their meals in the dining-hall.

The special nursing section should be quiet and not liable to disturbance from the passing to and fro of other patients, and should be sufficiently near the central kitchen to permit easy service.

For a *sanatorium*, about 20 per cent. of the sleeping accommodation for patients should be in the special nursing section; for a *combined institution*, it is desirable that about 36 per cent. of the sleeping accommodation should be so placed.

In a *combined institution*, it is undesirable that any special pavilion or section should be used exclusively for patients with advanced disease. The pavilion or section used for these patients should also include accommodation in separate rooms for patients in Groups A, B, or D, requiring special nursing, rest in bed, or supervision. If this is done patients will not be led to suppose from the place where they are being treated that their cases are hopeless.

Types of Buildings.

The drawings which accompany this memorandum aim at giving an indication of the lines on which buildings for this purpose may be designed, and it is hoped that these may be of service to those who are engaged in the provision of institutions for tuberculous patients.

The following plans are appended to the memorandum: A. Block plan of a 100-bed sanatorium with three separate pavilions. B. Block plan of a 100-bed sanatorium with a single pavilion. C. Ground plan of staff block. D. First floor plan of staff block. E. Plan of dining-hall and k
block. F. Plan of nursing pavili
thirty-six beds. G. Plan of conva
pavilion for thirty-two beds. H. P
two-storied pavilion for 100 beds. I
of two-storied pavilion for 100 beds
native design). (Of these we rep
plans C. and E.)

It will not usually be practicable
vide in a single one-storied buildi
beds in rooms or wards with beds ar
on one side only. Such an arrang
would necessitate a very long bu
which may be expensive to constru
cept on a level site, and which wo
inconvenient to administer. For an
tution for 100 patients it will often
ferable to arrange for three se
pavilions (Scheme I.); under some c
stances it may be found desirable
vide the accommodation in one two-
building (Scheme II.).

If an institution for more than 10
is required, it will usually be prefer
adopt a modification of Scheme I.,
least three pavilions: one a special n
section, and two separate pavilio
males and females respectively.

Schemes I. and II. have both be
pared upon the assumption that
accommodation will be required fo
sex. They may require modificat
this respect according to local needs.

An arrangement is also shown by
ten beds between the duty rooms
special Nursing pavilion in Plan F
the central section of the ground f
Plans H and I, ordinarily inten
each instance for five male and five
patients, can be utilised either entir
male or entirely for female patie
occasion may require. Some elast
the amount of accommodation for t
sexes is thus secured.

(Details of the various blocks are
in the plans.)

SCHEME I.

Scheme I. has been prepared to
the advantages to be obtained by
one pavilion for patients requiring
nursing or supervision and two add
pavilions for male and female patie
spectively, who are able to be up an
all day. This arrangement mak
efficiency and economy in nursin
secures separation of the sexes mo
ciently than is possible if all patie
treated in the same building.

It has been prepared for a *combi*
stitution and shows a special
pavilion for thirty-six patients, a p
for thirty-two male and a pavil
thirty-two female patients. The pl
be modified so as to make it suitab
sanatorium, by reducing the accom
tion in the special nursing pavil
about twenty beds and by increasin
in the separate pavilions for ma
female patients.

The block plan shows that the
portion of the site is occupied by th
block, kitchen and dining-hall bloc
out-buildings, and by the special
pavilion; the eastern and western s
are occupied by the separate conva
pavilions for male and female patie
spectively. The portions of the s
voted to male and female patients a
separated, so far as possible, by admi
tive and other buildings.

Special Nursing Pavilion.—Fo
venience of service this pavilion
nected with the centrally situated
and dining-hall block by a covere
about 60 ft. in length. The plans s
central service kitchen. On either
this kitchen is provided a nurses
room and accommodation for ten p

ur double-bedded and two single-
l rooms. It is intended that this
section should be used for those
ts who are acutely ill. The north
lah will be useful for nurses attend-
the patients. At the end of this
lah a hospital slop sink has been pro-
It is desirable that arrangements
be made for heating some of these
ms.

ach end of these centrally situated
is a lavatory section; and, beyond
n the wings is accommodation for
patients who require only a moderate
it of nursing. This accommodation
e provided either in double-bedded
or in small wards.

section between the service kitchen
e duty room on each side is practi-
ut off from the section beyond the
room. A small lavatory annexe
d behind the service kitchen, and
ing two w.c.s and one bath room,
en provided for these sections. This
ement makes it possible to use these
s entirely for male or entirely for
patients or for five patients of each
In the event of the sections being
ed by patients of different sexes, each
would have a separate w.c., but the
om would be common to the two.

valescent Pavilions.—The sleeping
nodation is shown partly in double-
rooms and partly in a small ward.
ients occupying these pavilions will
to take their meals in the dining-
provision has been made for the
of food, and the pavilions need not
ated close to the central kitchen
No provision has been made in
avilions for special nursing, as it is
ed that patients requiring this will
nsferred to the special nursing
n.

Scheme II.

s of a two-storied building have been
ed to meet those cases where local
stances make it desirable to provide
ole of the sleeping accommodation
ients in a single building. The
ave been prepared for a *sanatorium.*
proposed to use such a two-storied
g as a *combined institution*, the
n be modified to secure more accom-
on on the ground floor, within the
nursing section.

ision has been made for a centrally
l special nursing section on the
floor. The general arrangement of
tion is similar to that of the special
pavilion included in Scheme I.
ements have been made for the
nodation of patients needing little
supervision on the first floor and
wings on the ground floor. As it is
ed that the first floor shall be used
patients who are able to be up and
only narrow balconies for access to
ms have been provided in order that
ting and ventilation of the ground
oms may not be materially inter-
ith.

to be noted that the plan of the first
ffers from that of the ground floor,
e duty room having been provided.

General Observations.

for Patients and Height of
—The accommodation should be so
d that a floor space of at least
t. will be available for each patient;
ance between the centres of the
of any two adjoining beds should
less than 8 ft. measured along the
hind the heads of the beds.

nts' rooms should not be less than
in. high; wards should be higher, but may be carried partly into the roof and ventilated by openings in the gable end.

Doors should be made on the "stable door" pattern, so that in inclement weather the lower portion may be closed while the upper portion is left open. They should be constructed in the form of French casements with a clear opening of not less than 3 ft. 6 in., so that beds may easily be wheeled through them.

Windows should preferably be of the casement pattern and be hung "to fold" without mullions.

Baths should be provided on a scale of about one to twelve patients. They may be of enamelled iron and should be fitted with large taps and wastes to facilitate filling and emptying. Spray baths may also be provided.

There should be at least one water closet for every twelve patients. Hospital slop sinks should be provided in the special nursing pavilion.

Every institution should have ample store-room accommodation for linen, clothes, etc., and lockers for boots and shoes. The provision of some arrangement for drying patients' clothes will also be advisable.

Day Shelters.—The question as to whether day shelters shall be provided will require consideration for each proposed institution: if verandah accommodation is not adequate, day shelters will be needed. These should be of inexpensive construction.

Recreation Rooms.—In view of the importance of continuous open air treatment of patients, it is unwise to encourage them to collect in a recreation room, except for a very limited time, or on special occasions. In view of these considerations the dining room has frequently been regarded as sufficing for the use of patients for recreation, lectures, etc. If it is considered necessary to provide special recreation rooms for use on wet days, or in winter evenings, these may conveniently be added at the ends of the pavilions for convalescent patients.

Kitchen and Dining Hall Accommodation.—The block containing the patients' dining hall and kitchen for patients and staff should preferably be a one-story building, which should be placed near to the administrative block and to the rooms for patients requiring special nursing. It may be connected with the special nursing pavilion, if desirable, by a covered way.

The dining hall should, if practicable, have a southerly aspect.

The consulting room, dispensary, and laboratory, which should be centrally situated, may also conveniently be included in this block.

Unless other accommodation is available for the male domestic staff provision may be made for them in an upper floor of the kitchen and dining hall block above the store rooms, etc.

Staff Block (see p. 159).—The position of this building should be selected with a view to giving the greatest facilities for economical service and administration. The accommodation for a sanatorium with 110 beds will include medical officer's quarters, offices, matron's quarters, dining room for nurses, bedroom accommodation for the nurses and servants. Each nurse should have a separate bedroom of an area of about 100 sq. ft. Usually one nurse will be required for twelve patients; but more will be needed if a considerable number of patients with advanced disease are being treated. Baths and water closets should be provided in the proportion of not less than one to each twelve nurses or servants.

It is desirable that the principal cooking for the staff should be done in the central kitchen block, so that a separate fully-equipped kitchen is not required in the administrative block. A small kitchen pantry with food store is shown on the plan adjoining the nurses' dining room. This could be provided with a small range or gas cooker for minor cooking.

Out-Buildings.—The laundry should consist of receiving room and washhouse, drying room, and ironing and delivery room. Mortuary accommodation may be provided in the same block.

The amount of boiler house accommodation will depend on the amount of steam required for laundry, disinfector, heating, and hot water supply and for driving dynamos if electric current is to be generated in this way for lighting or other purposes. Special provision should be made for the sterilisation of sputum and for the cleansing of sputum cups. Unless suitable arrangements are available elsewhere some form of disinfector for clothing and bedding should be provided.

Hot Water Supply.—An ample and constant supply of hot water is desirable, and the system should be capable of easy extension.

Heating and Lighting.—It will usually be unnecessary to heat the patients' quarters excepting the dining hall and some of the rooms for patients requiring special nursing. A system of low pressure hot water heating will be found most economical for this purpose.

Electric lighting should be employed where electric current is available or can be produced economically. It may be necessary to use coal gas, acetylene, or petrol air gas: these illuminants have been found to be fairly satisfactory for use in sanatoria if suitable fittings are provided and adequate precautions are taken against fire.

Construction.—Where, owing to local circumstances, the use of brickwork would be economical, cheap bricks may often be employed faced externally, if necessary, with rough-cast or cement. Walls in exposed position should be of hollow construction.

In some districts other materials may be less expensive and may be employed, such as steel framing carrying terra-cotta slabs, or concrete slabs or blocks plastered internally and cemented externally, or timber-framing lined internally with asbestic sheeting or expanded metal lathing plastered with a hard setting plaster, rough-cast or coated externally with weather boarding chemically treated. The roofs should be of simple construction and may be covered with slates, tiles, or asbestic material. The floors of verandahs should be of impermeable material.

Fletchers' "Carpentry and Joinery."

In the fourth edition of their handbook on "Carpentry and Joinery," the authors have to a large extent re-written the text, and have added much new material and many fresh illustrations, the latter including sketches of many old buildings, in England and on the Continent, in which carpentry and joinery are conspicuously employed. Every aspect of the craft of the carpenter and joiner is dealt with, and the book is copiously illustrated.

"Carpentry and Joinery." A Text-book for Architects, Engineers, Surveyors, Craftsmen, and Students. Fully illustrated and written by Banister F. Fletcher and Herbert Phillips Fletcher. Fourth edition, revised and enlarged. Pages xii. + 324, 5⅛ ins. by 7¼ ins., 6s. net. London: Whittaker & Co., 2, White Hart Street, Paternoster Square, E.C.

ADMIRALTY WORKS DEPARTMENT REORGANISATION.

The long-delayed report of the Committee appointed to formulate a scheme for the reorganisation of the Admiralty Director of Works Department has now received the sanction of the Treasury and the Admiralty. The personnel at the Admiralty under the scheme will be composed as follows, so far as the principal positions are concerned:—

	Scale.
1 Director of Works ...	£1,300 by £50 to £1,500
2 Assistant Directors of Works	£1,000 by £50 to £1,200
2 Supervising Civil Engineers	£750 by £25 to £950
3 Civil Engineers	£300 by £20 to £550
3 Assistant Civil Engineers	£200 by £15 to £300
10 Temporary Engineering Assistants	£150 by £10 to £200
1 Senior Examiner of Technical Accounts	£500 by £20 to £700
4 Examiners	£350 by £15 to £450
12 Assistant Examiners	£150 by £10 to £300
1 Surveyor of Lands...	£700 by £25 to £900
1 First Assistant to Surveyor of Lands	£400 by £20 to £600
1 Second Assistant to Surveyor of Lands	£200 by £15 to £400
1 Surveyor of Coastguard Buildings...	£400 by £20 to £600
1 District Surveyor of Costguard Buildings	12s. 6d. per diem, rising by increments of 4d. per day per year to 20s.
3 Superintending Draughtsmen	£200 by £15 to £400

No further examinations under the existing regulations will be held for the posts of Assistant Civil Engineer or Assistant Surveyor. The Surveyors and Assistant Surveyors will become redundant, and as vacancies arise their work will be taken over by the new class of Examiners and Assistant Examiners. The draughtsmen and accountant clerks, who are not brought within the scheme, will be allowed to retain their present designation, and will be given annual increments; a limited number will become established Civil Servants. At present the scheme applies to the head office only, but later on it will be extended to the outports. When the scheme is so extended provision will be made for the inclusion of General Foremen of Works and Foremen of Works.

SOCIETIES AND INSTITUTIONS.

LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.

A general meeting of the above society was held on Thursday evening, February 19, at the Leeds Institute, Cookridge Street.

In the absence of the president and vice-president, Mr. W. H. Thorp, F.R.I.B.A., occupied the chair.

Mr. Patrick Abercrombie, M.A. (Liverpool), gave a lecture on "The Architect's Sphere in Town Planning, Past and Present," illustrated with lantern slides.

The lecture covered a large ground, practically showing the whole development of town planning and dealing with the component parts of the problem from the æsthetic, the traffic, and the sociological points of view.

The paper was largely an attack upon architects for not interesting themselves sufficiently in matters of town planning of the present day.

Mr. Abercrombie concluded his lecture with a comparative diagram showing the density and disposition of English towns, Continental towns, the modern garden city, and with a suggestion for the future development of cities. The latter showed concentration of the centres for commercial purposes by the use of skyscrapers, so obtaining quicker transport into the outlying country in which were distributed the houses, the works and the manufactures also being concentrated in another locality.

The discussion which followed largely centred around the last proposition, and a vote of thanks to the lecturer was heartily accorded on the motion of the Hon. Secretary (Mr. W. Whitehead, A.R.I.B.A.), and seconded by Mr. J. H. Foggitt, A.R.C.A., A.R.I.B.A.

THE ROYAL TECHNICAL COLLEGE ARCHITECTURAL CRAFTSMEN'S SOCIETY, GLASGOW.

At a meeting of the above, held on Friday, February 13, Mr. T. G. Gilmour, A.R.I.B.A., in the chair, Mr. Donald Gair delivered a lecture entitled "Restoration of an Historical Building." He dealt with the restoring of ancient buildings in general, and drew a distinction between restoring and preserving. Many restorations are carried out under the Board of Works, and even those in Scotland are controlled from London. The work is executed by contractors at rates of wages, etc., previously arranged. Restoration work should be left distinct, and not coated with sooty water, as is often done. The foundations of many ancient buildings were very shallow, often protruding above the ground level, being composed of large flat stones laid dry. Occasionally castle walls were found to be 13 ft. thick at the foundations, 8 ft. at the first floor, and 6 ft. 6 ins. at the second floor. Much money was often spent strengthening the foundations when the fault really lay in the roof thrust. The joinery and plaster work of the old castles was plain and substantial, but the plumber did not seem to be in existence in those days.

LONDON MASTER BUILDERS' ASSOCIATION.

The ordinary meeting of the Council was held on Thursday, February 19, at the offices, Koh-i-Noor House, Kingsway, W.C., the President, Mr. Walter Lawrence, jun., being in the chair.

The reports of the special council and committees were read and adopted.

The result of three meetings of the Conciliation Board held on February 13 was reported. These Conciliation Board meetings were called to discuss alleged breaches of the working rule agreements.

Complaints reached the Association that the plumbers, crane drivers, and millsawyers and wood-cutting machinists, with whom working agreements are in existence, had been withdrawn from their employment during the past week. This Association, acting in conformity with the agreements, called the Conciliation Boards together for the purpose of considering the cases. There are three Boards, each composed of three employers and three operatives, and in each case the following resolution was carried unanimously: "That the action of the ——— Society in calling out certain of their members without the question having been referred to the Conciliation Board is contrary to the meaning and intent of the conciliation rule of the working rule agreement existing between the London Master Builders' Association and the ——— Society." The meaning of this resolution is that the men that they have broken the agreemen

The position *re* the Trade Dispu considered, and it was resolved, in re to a communication received from W. Bowerman, M.P., Secretary of th liamentary Committee of the Trades Congress, that his request for a con made on behalf of the various societies with whom the Associatio or recently had working rule agre should be acceded to, and the date same was fixed for Monday, Februar at 3 p.m. [The meeting was he was fruitless.—Editor.]

The returns made by members signing the undertaking and re work were considered very satisf more than 1,000 additional men hav turned to work during the week.

New members were elected, and applications for membership we ceived.

SPECIAL LEGAL REPO

Architect's Claim for Professional S

King v. Parker.

February 20. Court of Appeal. Before Lords Vaughan Williams, Kennedy, and Swinfen

This was an appeal by the de from a judgment at trial before Mr. Rowlatt at the Leeds Assizes, ju being given for the plaintiff.

Mr. Ed. Vincent King, an a and surveyor, of Bank Top, Dev brought an action at the assizes Mr. Ellis Parker, of Little Love Lan claiming £272 10s. for professional rendered in connection with the p erection of a picture palace on a site the Market Place, Dewsbury. Mr. contention was that the agreement verbal one and the building was tain, in addition to a picture pala shops, a café, billiard room wit full-sized tables, etc. He according pared plans, specifications, etc., wh defendant rejected, declining to p commission on £7,642, the estimat of the building.

The defendant said he told the that those associated with him in t ture would not provide more than or £4,000. Hence the plaintiff's pl £7,642 were useless. The agreem said, was that unless the plans, etc accepted the plaintiff should not be to anything. As he did not acc plans he denied liability, but as a native paid into court £21 in satisfa the plaintiff's claim.

Sir F. Low, K.C., appeared for pellant and said after the verbal agr at which he contended the stipulati £3,000 or £4,000 was made, corr ence ensued. That, he asserte material as being in support of the dant's contention. The plaintiff carried out the instructions given h therefore was not entitled to his fe

Without calling upon counsel other side, the Court dismissed the with costs.

Lord Justice Vaughan William mented on the fact that the defen now very different from what it wa assizes. The learned judge had parties before him and was the bes of the facts. He had decided to the plaintiff, and nothing had been ward to justify the Court in differi that.

Lords Justices Kennedy and Eady concurred.

COMPETITIONS.

Carnegie Libraries, Derby.

. R. Sutton, F.R.I.B.A., assessor
ompetition (limited to local archi-
r two new Carnegie branch libra-
e erected in the Alvaston and Nor-
districts of Derby, has recom-
for adoption the designs of Mr.
Eaton and Mr. C. B. Sherwin.

Secondary School, Bath.

rt criticism of the designs sub-
n the above competition is pub-
n page 156 of this issue. The
, unfortunately, are not available
duction.

Barnsley Town Hall.

rs and Licentiates of the R.I.B.A.
t take part in the above competi-
conditions not being in accord-
h the published regulations of the
stitute for architectural competi-

Public Offices, Shipley.

ive designs have been sent in for
e competition, which is limited to
s practising in Yorkshire. Mr.
P. Edwards, city architect of
, is the assessor, whose award is
shortly.

IN PARLIAMENT.

r Press Gallery Representative.)

rnment Buildings at Delhi.

arles Hunter asked the Under-
of State for India if he could
approximate cost of the new
ent buildings at Delhi; and if the
which they were situated became
erty of the Indian Government
after the announcement of the
f the capital.

ntagu in a printed reply stated:
ct estimates of the engineers and
are at present being examined
overnment of India. According
estimates the outlay on Govern-
ldings of all kinds will amount
000.

d has been purchased by Govern-
r a notification which was issued
ly after the announcement of the
capital, and under terms which
price on the value prevailing at

Building Trade Dispute.

son Wilson asked the President
rd of Trade whether unemployed
the building trade registering
s at London Labour Exchanges
g asked whether they were pre-
gn the circular recently issued by
r builders, and whether these
ad been authorised to put this
nd thus associate the Exchanges
xtent with the document.

rns replied that applicants to
xchanges for vacancies notified
master builders had been care-
med both of the existence of a
d of the conditions of employ-
ed, including, of course, that to
Wilson referred. The informa-
een given by way of warning of
on to be expected, and in no way
ation to workmen to comply with
r this proper information work-
t have had fruitless journeys to
obs in ignorance of a condition
ld cause them to refuse the
rrival.

on Wilson asked whether if any of those men who accepted employment at a distance from London were not allowed to start work because they were locked out they would be entitled to unemployment benefit under the Insurance Act.

Mr. Burns said he did not think that arose out of the question. It was the duty and object of the superintendents of Labour Exchanges to give truthful information as to the issue and causes of a dispute, but to observe absolute neutrality from the point of view of the dispute itself.

In reply to another question by Mr. Tyson Wilson, Mr. Burns said certain vacancies were notified to the Dover Exchange with regard to which it was stipulated by the employer, as a condition of employment, that applicants should not have been locked out by the London Master Builders' Association. These vacancies were communicated to the St. Albans Exchange, which, in bringing them to the notice of certain applicants for employment, followed the practice prescribed in the Statutory Regulations, namely, to give the applicants all the information in their possession as to the conditions of employment, with a view to avoiding disappointment and fruitless journeys.

Mr. Tyson Wilson asked whether the men would be allowed to post up in Labour Exchanges a black list containing the names of unfair firms.

Mr. Burns said the hon. member had not given him any evidence of a black list. He did not believe that one was in existence.

Mr. W. Thorne remarked that there was no need for a black list, as a man's insurance card told where he came from.

TRADE AND CRAFT.

New Vertical Drawing Apparatus.

Messrs. A. G. Thornton, Ltd., have recently introduced the "Allhorn" Patent Vertical Apparatus, which embodies a new rolling device for controlling the movement of the straight-edge. The exact tension of the rollers on both sides of the drawing board is controlled by an adjustable spring, and exact parallelism is insured by means of the tensioned wire working on the pulleys. The drawing board is made of yellow pine, the stand of beech, and the fittings of best gun metal. An improved spring bow is also among this firm's novelties.

Heating Contracts.

We are informed by the Acme Ventilating and Heating Co., of Liverpool, that they have secured the contract for heating at the Holy Trinity, Boys', Girls', and Infants' Schools at Birkenhead, and a similar contract at St. Anne's Schools, Birkenhead. The Acme Co. have also been entrusted with the heating contract at the New Automatic Telephone Company's works and offices at Liverpool.

THE LONDON LOCK-OUT.

Hitherto the joint conferences in the London dispute have proved abortive, the workers being unable to put forward any satisfactory guarantee against breaches of agreement. The lock-out therefore drags on, to the great loss and inconvenience of very many besides those immediately concerned in the dispute.

PROJECTED NEW WORKS.

Housing, Foleshill.

A provisional housing scheme has been adopted by Foleshill R.D.C.

Offices, Romford.

Romford Town Council have approved the erection of new public offices at a cost of £850.

Town Hall Enlargement, Newark.

Newark Town Council have decided to purchase premises for the enlargement of the present town-hall.

Markets, Newtown.

Newtown U.D.C. have adopted a scheme of cattle markets to be erected on municipal land near the railway at an estimated cost of £4,411.

Church, Binley, Warwick.

The Earl of Craven, Lord-Lieutenant of Warwickshire, has given a site for a new church to be erected on his estate at Binley, Warwickshire.

Houses, Chester-le-Street.

Chester-le-Street R.D.C. have decided to apply for sanction to borrow £12,200 for the erection of forty-seven houses at Washington.

Hospital Extension, Millom.

Millom and Bootle Infectious Diseases Hospital Joint Committee have recommended the erection of an additional building at an estimated cost of £1,300.

Church, Sheffield.

A new Baptist Church, to cost nearly £3,000, is to be built on the site of Taplin Road Church, the demolition of which is proceeding.

Public Baths, Paddington.

Paddington Borough Council have decided to complete the purchase of land near Porchester Road at a cost of £16,000 upon which to erect public baths.

Houses and Streets, Swindon.

The Works and Streets Committee of Swindon Town Council have recommended approval of plans for eighteen houses in Kingshill Road.

Water Supply, Riccall.

Riccall R.D.C. have adopted a scheme of water supply for Barlby, to cost over £3,000. Sanction of the L.G.B. is to be obtained.

Villas, Melksham.

Plans from Messrs. Bigwood and Co. for four semi-detached villas in Lower Forest Road, Melksham, have been approved.

Dairy, Hawick.

Plans for a new dairy, to be built by Hawick Co-operative Society, Ltd., have been passed by the Town Council. The cost will be about £3,000.

Pier, Burnham.

A Local Government Board inquiry has been held with respect to an application by Burnham Urban Council for power to borrow £10,550 for a new pier.

Plans, Brightlingsea.

Plans have been passed for a house at 52, Church Road, for Mr. A. J. Aldous; a house at 21, Church Road, for Mr. J. Ball; an amended plan for a house at 2 and 4, Ladysmith Avenue, for Mrs. E. Lake; and of an office for the Anglo-Swedish Preserving Company, Limited, at 141, Lime Street.

New Fire Station, Tooley Street.

It is proposed to erect a new fire station in Tooley Street, London, to cost £6,250.

Town-planning Scheme, Hull.

Hull Corporation Works Committee have approved an important town-planning scheme for the eastern boundary of the city and the area adjoining the Garden Village. The estimated cost is £73,000.

Works, Swansea.

Swansea municipal authorities contemplate road widening and tramway extensions in different parts of the borough involving a total expenditure of about £20,000.

Art Gallery, Darwen.

The Trustees of the Lightbown Bequest have decided to devote the money at their disposal (£10,000) to the erection of an art gallery and museum for the public of Darwen.

Cottages, Boreham Wood.

Plans have been prepared for cottages to occupy a site which will accommodate sixty cottages of 15 ft. frontage. Barnet Rural District Council have agreed to a first instalment of twenty-five cottages.

Cottages, Winchcombe.

Winchcombe Rural District Council have decided to apply to the Local Government Board for sanction to borrow £2,300 for the erection of twelve cottages on Greet Road, Winchcombe.

Miners' Church, Bentley.

The colliery proprietors of Bentley, near Doncaster, have given a site in the new village and £2,000 towards the erection of a church, the erection of which will be proceeded with almost immediately.

Asylum, Swansea and Merthyr.

A new asylum is to be erected at Cefncoed, Merthyr, at an estimated cost of some £180,700. The tender of Messrs. Korten Brothers, London, for heating the buildings at cost of £19,160 has been accepted.

Houses, etc., Slough.

Slough U.D.C. have approved the erection of four houses in Wexham Road for Mr. R. Cozens, the laying-out of the Upton Towers Estate for Messrs. Langley and Johnson, and additions to Gotha Ironworks.

Buildings, Pudsey.

Pudsey Town Council have adopted a scheme for providing the town with swimming baths, fire brigade station, and housing accommodation for the highway department. The scheme is estimated to cost £10,000, exclusive of land.

London Institution Rebuilding.

Official approval has been given to the plans prepared by Professor F. M. Simpson, F.R.I.B.A., for repairing and altering the old buildings of the London Institution so as to adapt them to the requirements of the projected School of Oriental Studies.

Works, Bradford.

A Local Government Board enquiry has been held into the application of the Corporation for sanction to the following loans:—£6,705 for cottage baths at Greengates, Great Horton, Oswald Street, and Worthington Street; £800 for alterations and extensions at Drummond Road baths; £1,022 for bowling greens at Horton Park, Victoria Park, and Wyke Recreation Grounds, etc.

Houses, Chelmsford.

Plans passed last week by Chelmsford Town Council include the following: House, Swiss Avenue: shop and offices, Rainsford Road; twelve houses in three blocks, Henry Road; new stores off Moulsham Street; house, Coval Lane; and pair of houses, Coval Lane.

Plans, Rugby.

The following plans have been approved: House in Frederick Street, Mr. C. Louch; two houses in Park Road, Mr. C. Morehead; house in Poplar Grove, Mr. W. Taplin; alterations at 18, Murray Road, Mr. D. Ashton; house in Alfred Street, Mr. H. Miller; house in Lawford Road, Mr. W. E. Gray.

Houses, Orrell, near Wigan.

The following plans have been approved provisionally:—Four houses in Smith's Road, for Mr. F. Lyon; two houses in Smith's Road, for Mr. P. Ashcroft; two houses in Orrell Road, for Mr. Wm. Liptrot; four houses in Lodge Road, for Mr. J. Sharrock; shop and house in Church Street, for Mr. H. Ball.

Church Improvement, Wrexham.

A scheme for the improvement of the east end of Wrexham Parish Church has been approved. The scheme, which will be drawn up in accordance with the recommendations of Sir Thomas Jackson, includes the provision of a new reredos, a marble pavement for the chancel, new altar rails, and good glass to replace the inferior glass in the east window. The cost of the work will be £2,000.

Fitzwilliam Museum, Enlargement.

The necessity for enlarging the Fitzwilliam Museum, Cambridge, has been long apparent, and by the munificence of the late Mr. Marlay this enlargement has now been brought within the range of realisation. The Financial Board have for some time been negotiating with the Master and Fellows of Peterhouse for the purchase of the site, nearly two acres, adjoining the Fitzwilliam Museum on the south, known as Grove Lodge, and they now recommend its purchase for £12,000.

Cottage Hospital Extensions, Upper Norwood.

Further extensions are in prospect at the Cottage Hospital, Upper Norwood, the object being to afford proper residential accommodation for the nursing staff upstairs and better kitchen facilities below. Messrs. Edwin T. Hall, F.R.I.B.A., F.R.San.I., and E. Stanley Hall, M.A., A.R.I.B.A., are the architects, and the cost of the work will be about £1,500.

Buildings, Hendon.

The following plans have been passed by Hendon Council: Extensions to garage, The Burroughs, Hendon; two pairs of semi-detached houses, Golders Manor Drive, Golders Green; two houses, north side of Wentworth Road, Golders Green; seven houses, Ravenstone Road; two new roads, Elm Crescent and Acacia Avenue; detached house, West Heath Road; pair of semi-detached houses, south side of The Park, Golders Green; garage, rear of No. 8, Clifton Gardens, Golders Green; detached house and garage, Uphill Road, Mill Hill, N.W.; garage, rear of No. 16, Hammers Lane, corner of Wills Grove, Mill Hill; twelve houses, west side of Greenfield Gardens, Golders Green; twelve houses (two groups of six each), south side of Babbington Road, Hendon; sixteen terrace houses, south side of Woodville Road, Golders Green; four houses, north side of Bell Lane; addition to "Bittacy View," Bittacy Hill; ten houses, west side of Finchley Road, Golders Green; Catholic Church (St. Edward's), Fi Road, near Hoop Lane; nine houses, Wentworth Road, Te Avenue, Highcroft Road, and Litt Road; motor garage, corner of I shire Place and Finchley Road; t four shops, Queen's Road, for M G. P. Cracknell and E. Streather; Finchley Lane.

London.

Consent has been given by the to the execution of the following w

Battersea.—One-storey shop at N Battersea Bridge Road, Battersea, application of Mr. C. Harwood, on of Mrs. H. Harwood.

Chelsea.—Wooden hoods, bay-wi and cornices to Nos. 15-21, Vale A Chelsea, on the application of Mr. Williams, on behalf of Mrs. F Williams.

Deptford.—Additions at the rear 38, The Broadway, Deptford, on th plication of Mr. J. H. Forbes, on of Mr. F. H. Ball.

Finsbury, East.—Uniting Nos. 8 85, Golden Lane, Finsbury, each bu exceeding 250,000 cubic feet in exte the application of Messrs. Hobde Porri, on behalf of Messrs. Greenla Co.

Hampstead.—Cottages and a gar The Hill, North End Road, Hamp on the application of Messrs. W. Owen, on behalf of Sir W. H. Lever.

Holborn.—Uniting Nos. 303 an High Holborn, on the applicati Messrs. G. Lansdown and Brown, half of Mr. B. Shorthouse.

Islington, East.—One-storey ad Drayton Park, and a one-storey ad Aubert Park, Islington, on the appli of Messrs. Young and Hall, on beh the Express Dairy Company, Limi

Kensington, South.—Additional staircase and lift enclosure at the r No. 1, Collingham Road, Kensingt the application of Mr. W. Cave on of Dr. S. Hurlbutt.

Lewisham.—External iron stairc No. 22, Sydenham Road, Lewisha the application of Mr. H. W. Longd behalf of Lord's Model Laundry.

Marylebone, East.—Block of flats a site next to Weymouth Street an lam Street, St. Marylebone, on the cation of Mr. P. Hoffmann, on beh Mr. C. E. Peczenik.

St. George's, Hanover Squ Uniting No. 177, Regent Street, to 179-183, Regent Street, at the bas and ground floor levels, on the appli of Sage and Co., Limited, on beh Mr. J. C. Vickery.

Strand.—Alterations at St. House, Nos. 7 and 8, Norfolk Strand, on the application of Mr. J.

Wandsworth.—Bay-windows, p and half-timber gables with bargeboa five houses, Old Devonshire Road ham, on the application of Mr. Hastilow, on behalf of Mr. F. E. C

Whitechapel.—Buildings at Nos. 5 60, Whitechapel High Street, next t Stake Court, Whitechapel, on the ap tion of Messrs. Deakin and Camer behalf of Davis's Feather Mills, Lim

OBITUARY.

Mr. James Hine,

Who designed Plymouth Guildha Municipal Buildings, died at Laun Cornwall, on February 15, aged 84.

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ELECTRICAL NOTES.

Pyrene.

A demonstration was recently given by the Western Electric Company, Limited, of North Woolwich, of a fire extinguisher known by the above name, and the matter comes within our scope because it happens that the liquid is such an excellent insulator that it can be directed on to high-tension electric apparatus without giving any shock to the operator, whilst it has the property of extinguishing with the greatest ease very powerful arcs. Hence it should be of value to all station engineers, especially to those whose plant comprises high-tension switchboards, where "electric fires" are occasionally known to break out; also on electric railways, where a short circuit may produce an arc which rapidly damages the motors or controllers. It has been the practice up to the present to extinguish such fires by throwing sand on the arc, but the result is that the apparatus is often badly damaged, because the intense heat of the arc fuses some of the sand and turns it into a kind of glass.

Another justification for the reference to Pyrene here is that some two years ago the writer had the arranging of a demonstration of the capabilities of the same extinguisher on behalf of certain American gentlemen who had a limited option on the British rights of the American patent, given by the American Pyrene Company. For certain reasons the underwriting required could not be obtained before the option expired, so that the matter fell through at the time; but we are glad to see now that the Pyrene business has fallen into such excellent hands. Apart from the liquid itself, the rights cover a special form of syringe or extinguisher, which consists of a brass container about 3 in. in diameter and 14 in. long, containing a double-acting pump, so that the liquid can be projected in a continuous stream. The extinguisher holds one quart, weighs about 5 lb., and projects the liquid as far as 30 ft. The liquid known as Pyrene probably contains a good deal of carbon tetrachloride or something of a similar nature. Anyhow, when it comes in contact with fire it produces a heavy, inert gas of a non-poisonous nature, which prevents access of oxygen to the burning material, so that combustion cannot continue.

One of its most valuable properties is that it is quite harmless to practically any material it falls on, whether paper, woodwork, metal, fabrics, or foodstuffs. Naturally, Pyrene could not be employed for extinguishing a large fire, once this has got a good hold, but for arcs and incipient fires, whether caused by ordinary means or by such inflammable media as petrol or benzine, it is invaluable. Hence it should be an ideal extinguisher for domestic use, and for carrying on electric trains, motor-cars, ships, etc. The writer was present at a demonstration at the Ranelagh Club, when a motor-car was set on fire. Two persons courageously remained seated in it, and two others, armed with Pyrene extinguishers, set to work and put out the fire within two minutes. The tests which the writer arranged took place at the electricity works of the Borough of St. Marylebone, through the courtesy of the chief electrical engineer, Mr. A. H. Seabrook, before a large number of experts and fire insurance officials. It was then shown that the liquid was
easily capable of extinguishing a bu
ignited petrol, besides wood, wool,
lene, and other inflammable subst
Although the syringe is of metal,
of Pyrene was directed on to the
mutator of a dynamo generating
at 500 volts, without any damage ei
the operator or to the commutator.
a thing would obviously be quite
sible with water or any chemical
acid or alkaline nature. Furthe
steel rails, connected to the electric
were drawn apart and pulled out an
several hundred horse-power, whic
almost immediately extinguished b
of Pyrene. All that is really requi
the use of the extinguisher is cooln
the part of the operator and a well-
jet.

Ediswan Quartzalite Heaters

These heaters, which are made
the Bastian patents by the Ediso
Swan United Electric Light Con
Limited, are described in a booklet
by that company. One of the
features of the booklet is that it illu
the actual use of the various appara
drawing-room, dining-room, bath-
library, etc., instead of the usual cat
blocks of the apparatus them
Another useful feature is that the r
cost per hour is quoted in each case
of the apparatus being rated at 1.
These apparatus are formed of a
resistance wire in quartz tubes, whic
out a cheerful red glow. The fact
phasised by the makers that
heaters can be placed in any par
room, or be moved about from ro
room as required, and that it is
sirable or even necessary to place t
the fireplace.

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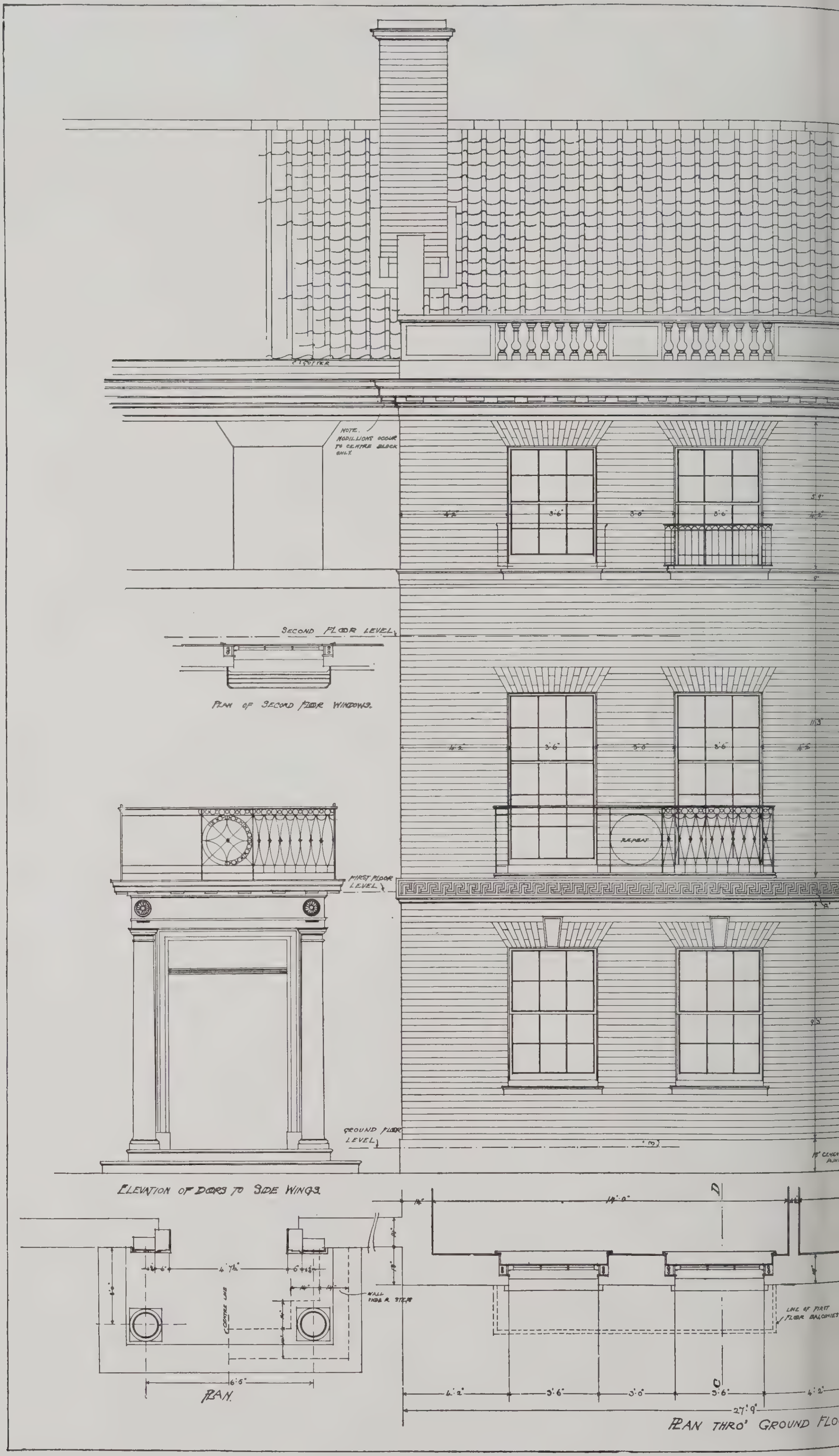

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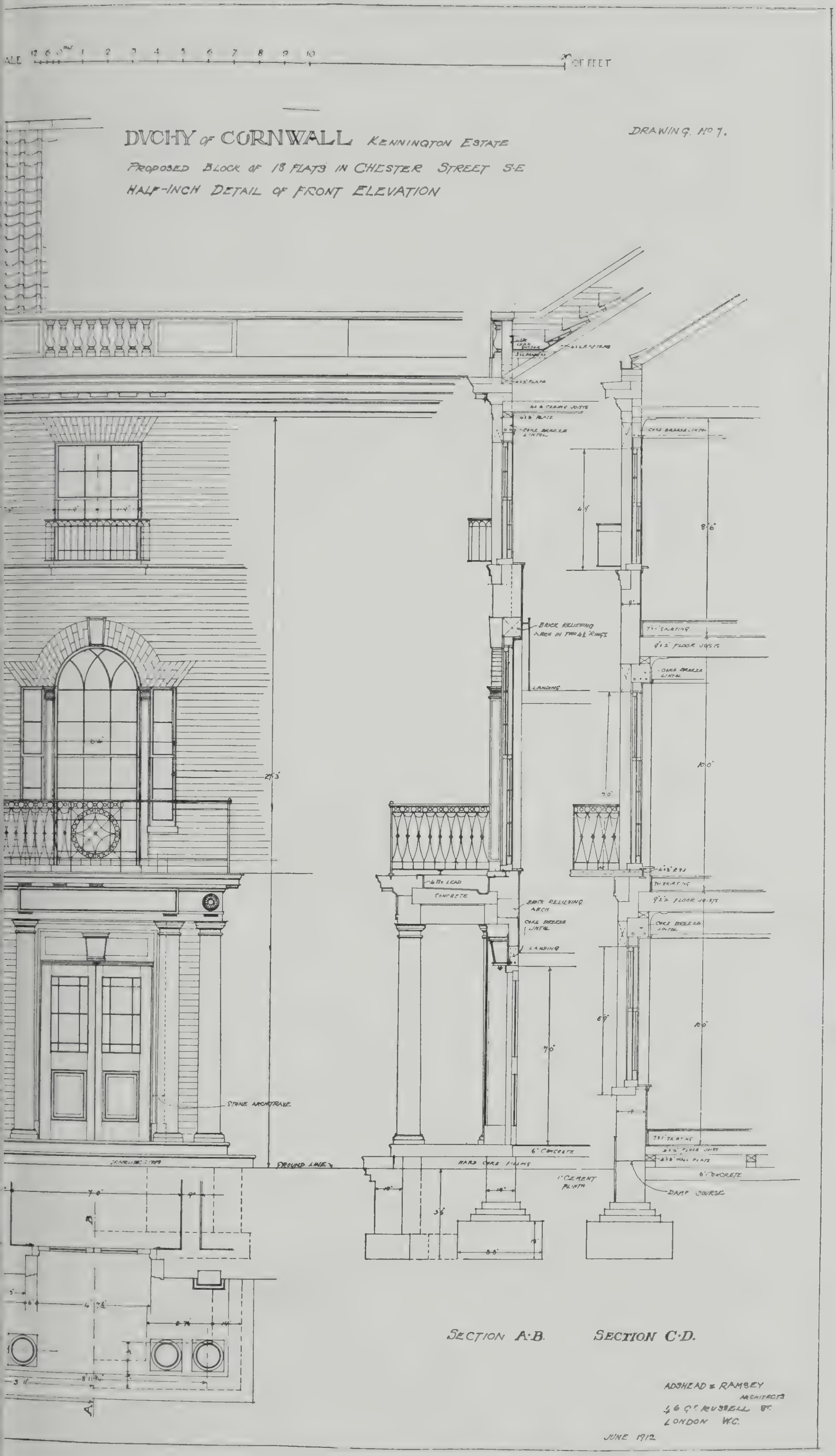
ADSHEAD



OF CORNWALL ESTATE, KENNINGTON, S.E.: DETAIL OF FLATS IN CHESTER STREET.

ITECTS.

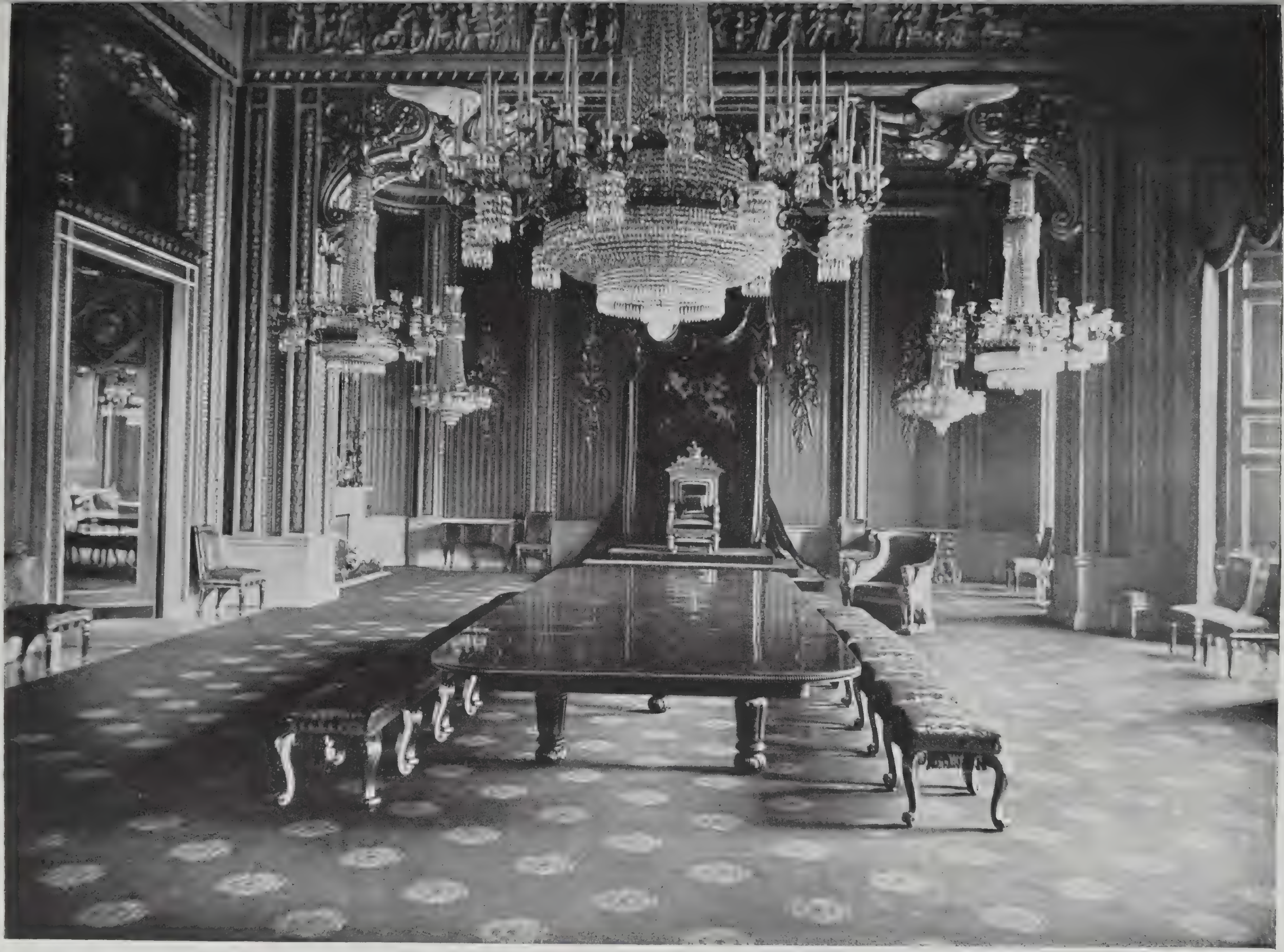
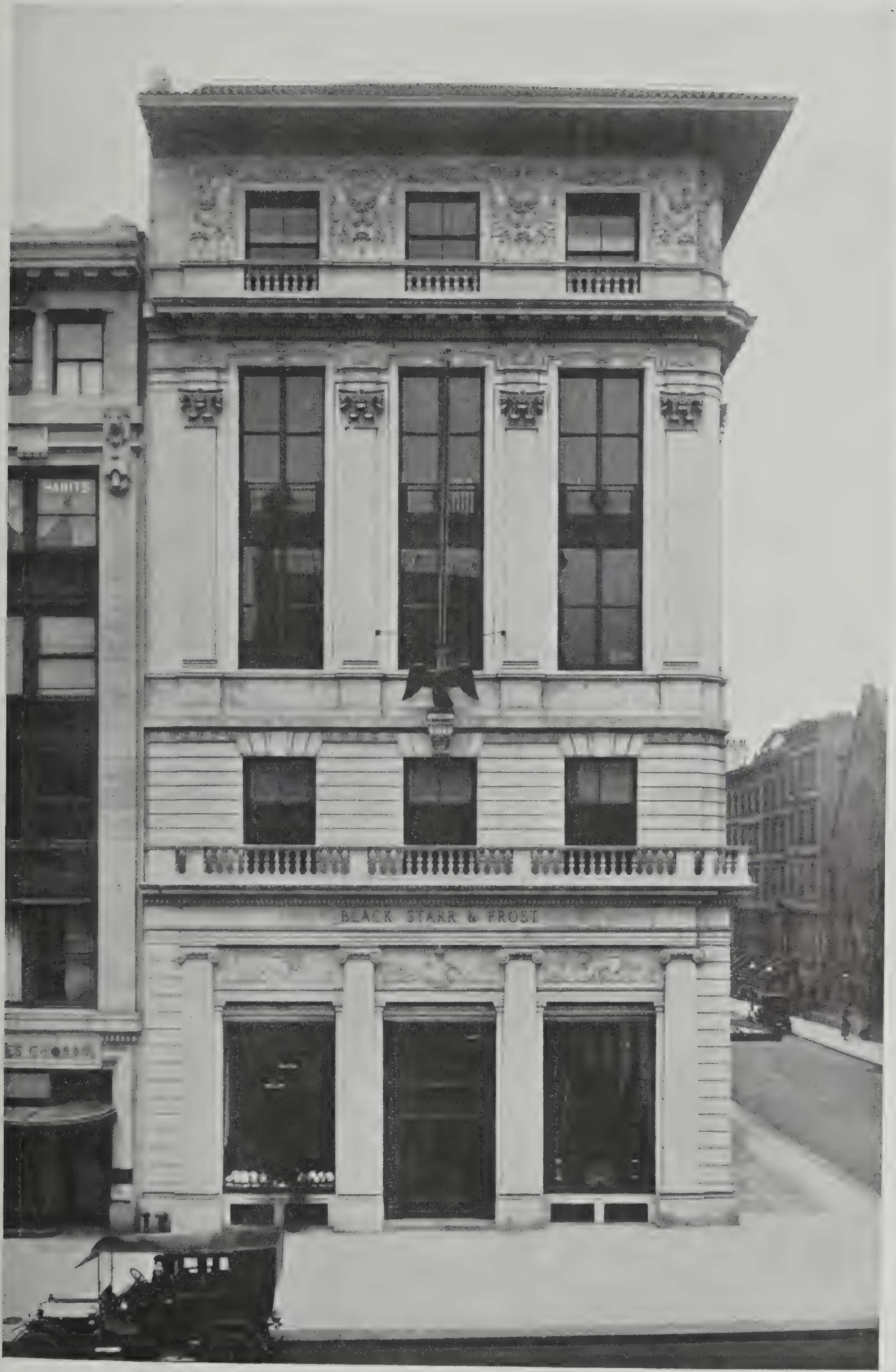


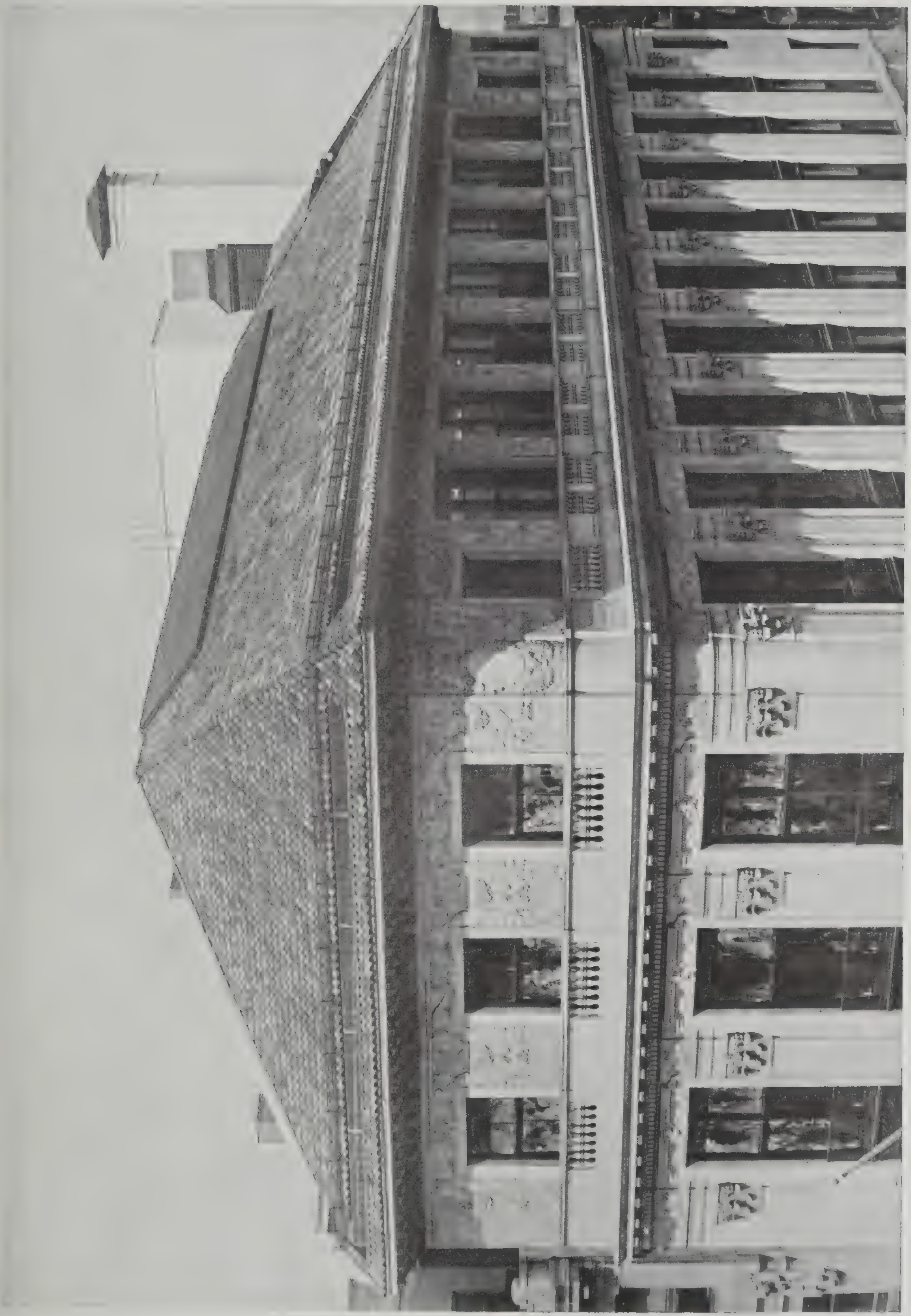
Photo: H. N. King.

PALACE INTERIORS. III.—BUCKINGHAM PALACE: THE THRONE ROOM.



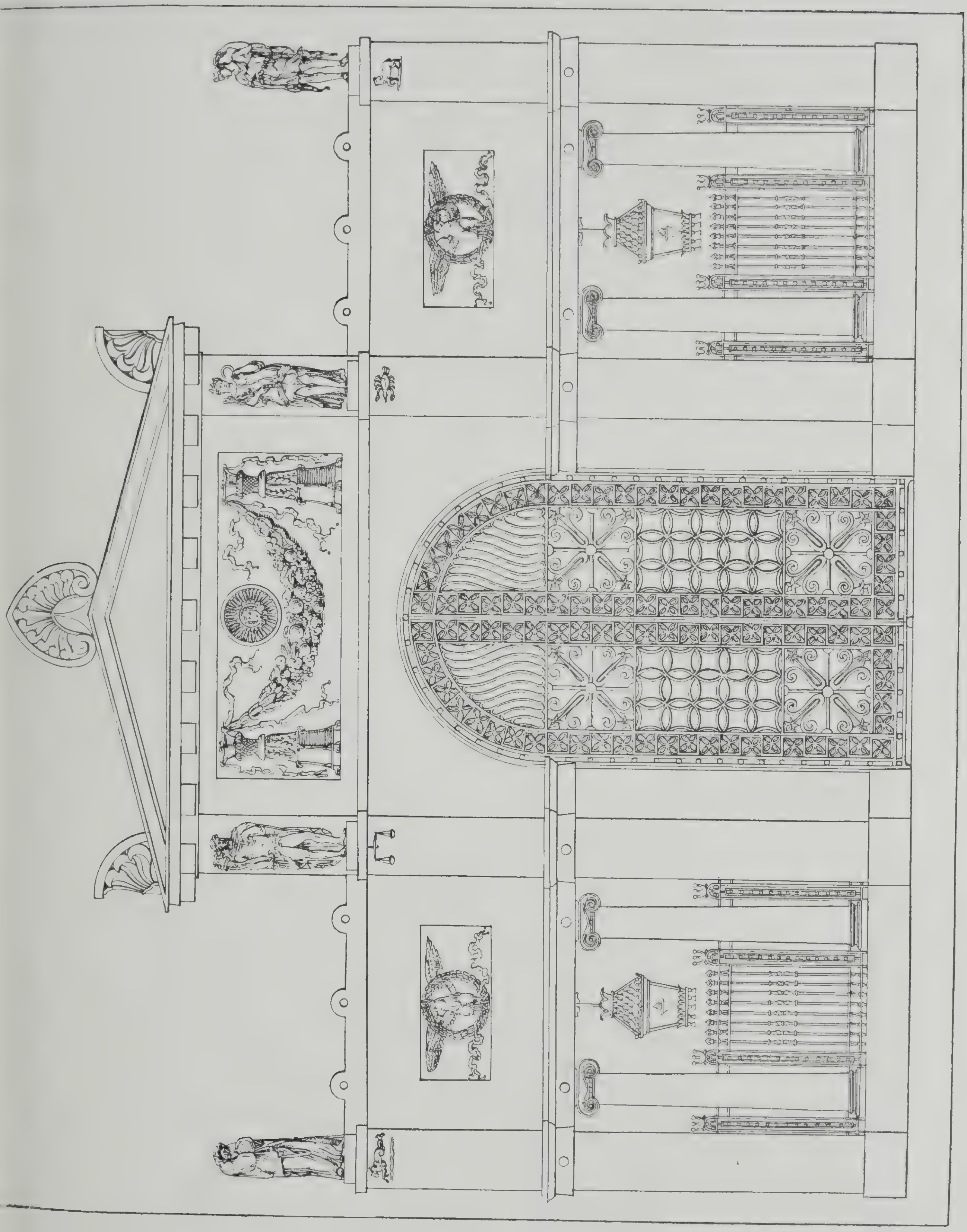
MODERN AMERICAN ARCHITECTURE. IV.—BLACK, STARR, AND FROST BUILDING, NEW YORK.

CARRÈRE AND HASTINGS, ARCHITECTS.

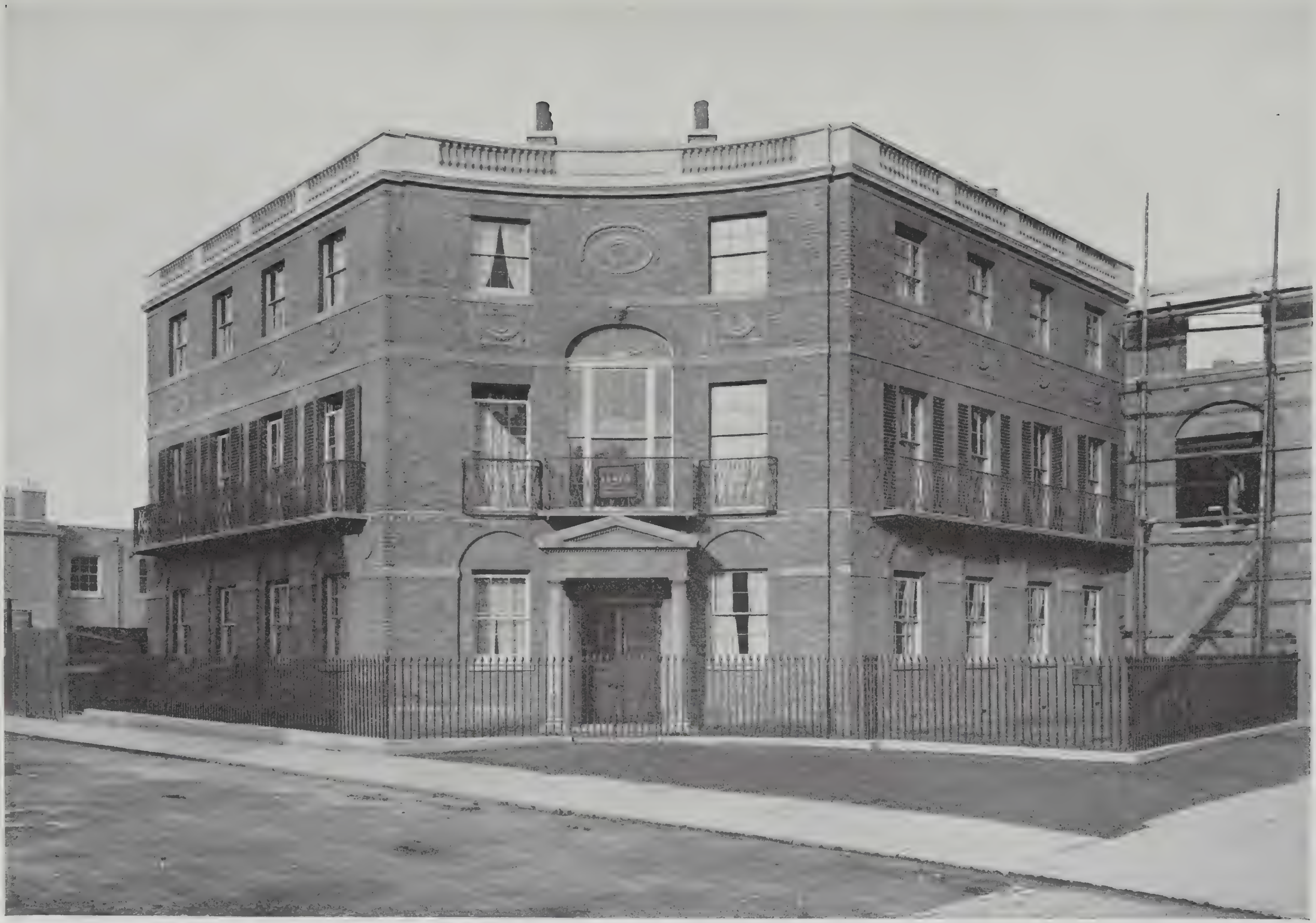


MODERN AMERICAN ARCHITECTURE. V.—BLACK, STARR, AND FROST BUILDING, NEW YORK: DETAIL.

CARRÈRE AND HASTINGS, ARCHITECTS.

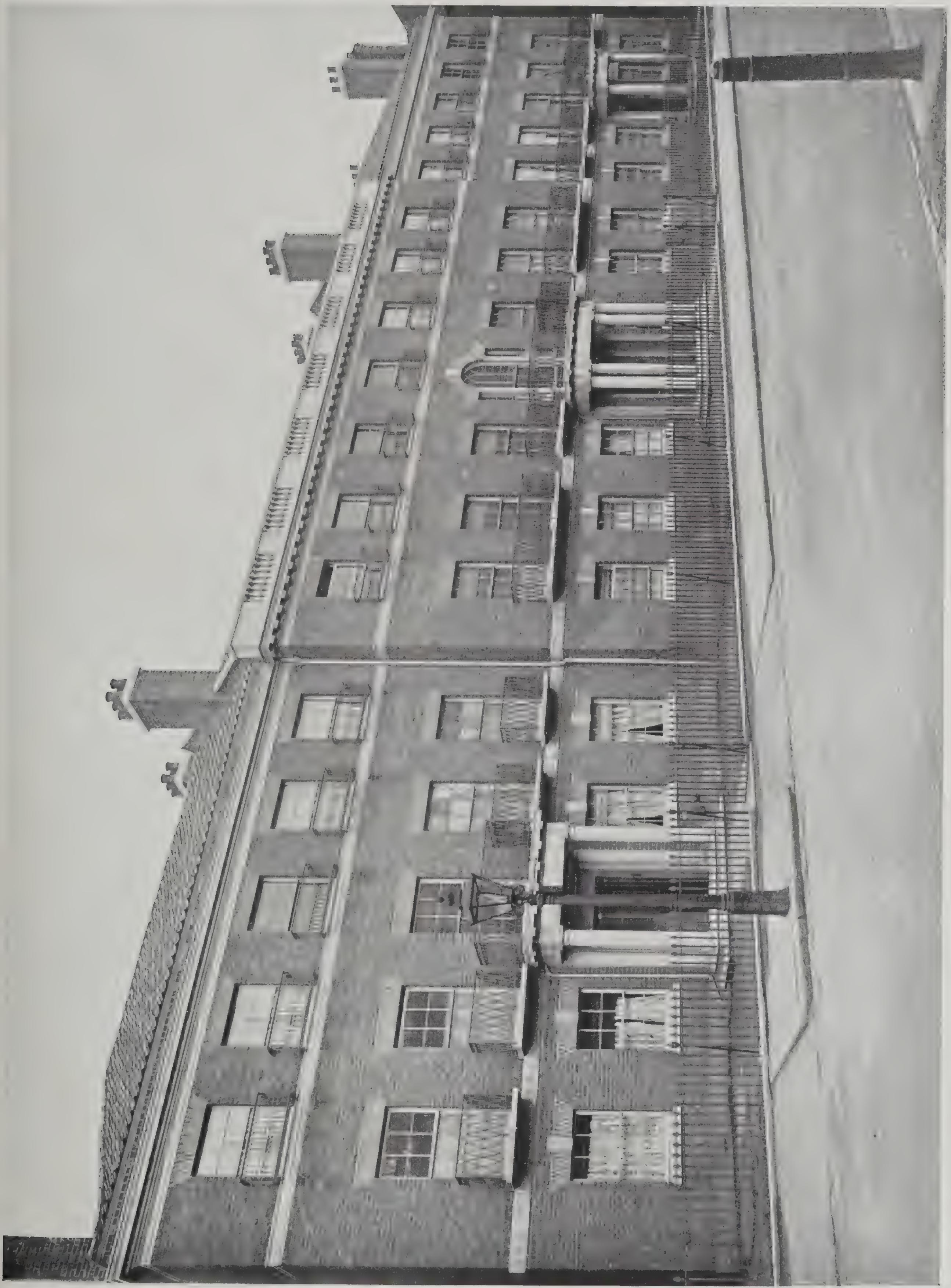


COTTINGHAM'S DESIGNS FOR IRONWORK. V.—ENTRANCE GATES.



MODERN DOMESTIC ARCHITECTURE. XXIV.—REBUILDING OF THE DUCHY OF CORNWALL ESTATE, KENNINGTON, S.E.: FLATS, UPPER KENNINGTON LANE AND COURTENAY STREET.

ADSHEAD AND RAMSEY, ARCHITECTS.



MODERN DOMESTIC ARCHITECTURE. XXV.—REBUILDING OF THE DUCHY OF CORNWALL ESTATE, KENNINGTON, S.E.: BLOCK OF FLATS IN CHESTER STREET.

ADSHEAD AND RAMSEY, ARCHITECTS.

THE
ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, March 11, 1914. Volume XXXIX. No. 1001.

No. 75

(*From Piranesi.*)

THE ARCHITECTS' &
BUILDERS' JOURNAL.

MARCH 11, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1001.

The Battle of the Painters.

THE internecine feud now raging among the various schools of painters cannot be without interest to architects. Some conflicts are so terrible that we witness them with a feeling of awe; our very faculties are benumbed, as if we were in the presence of high tragedy. Others, not less important, have an element of comedy, which induces in the spectator a mood akin to joy. He realises the grave position of the protagonists, and he knows that they are in deadly earnest and would throttle each other if they could; yet he cannot forbear to smile.

Most architects will undoubtedly take a certain malicious pleasure in the present battle royal between Post-Impressionists and Academicians. It is perhaps a lamentable fact that the relation between painters and architects is not altogether an amicable one. Architects resent the manner in which painters as a class are wont to arrogate to themselves alone the title of artists. What makes matters worse is that the public has taken them at their own valuation; hence, if anybody says that he is an "artist" it is immediately assumed that he must be a painter. The crowning humiliation to our profession occurs when we are told (and who has not heard the phrase, even in the mouths of those who ought to know better?) that So-and-so "has given up architecture and has taken to art." There are signs, however, that this attitude is about to be modified, and that painters themselves will recognise the absurdity of the claims so often made upon their behalf.

Mr. Clive Bell, one of the chief defenders of the so-called Post-Impressionist School, has written a highly original book, entitled "Art," in which he has many illuminating things to say upon the subject of æsthetics. The word "Post-Impressionist" is, by the way, a most unfortunate one, for it connotes many tendencies in art which are mutually contradictory For instance, it is inconceivable that such a born decorator as Gauguin could have looked with approval upon the work of Matisse or Picasso. The word is now the nickname of a group of painters who have nothing whatsoever in common except a revulsion from realism as commonly understood. And it is a negative value that we imagine most people will find in the writings of Mr. Clive Bell. He is a destroying force, and he clears away much lumber. In his opinion a large proportion of pictures both ancient and modern do not come under the category of art at all. If this conclusion ever becomes generally accepted, such a result will be mainly due to the influence of photography. It is strange how the invention of a mechanical appliance has done more to classify our ideas about the theory of æsthetics than centuries of philosophising on the part of critics who had not sufficient wit to realise the new situation that would come into being when craftsmanship was shown to be no longer the essential part of artistic creation. Every man of perception now acknowledges that whatever may be the object at which painters may legitimately aim, it is certainly not their business to produce mere copies such as could better be obtained by means of a camera. It is pleasant for us to reflect upon what a solid basis architecture rests; one cannot conceive of any invention which could deprive our art of its meaning or its necessity. Not only by photography, but by literature, too is painting assailed. How many famous pictures of the past but tell a story or point a moral, and were only made to perform these offices because of the rarity of books! The written word, however, is powerless to provide us with the benefits that architecture bestows Fine language can bring to our minds lovelier scenes than the cleverest painter can display to us, but it cannot protect us from the rain nor give dignity to a mean building.

It is likely that, as years go on, painting will take ever a less and less important place in the hierarchy of the arts. Its decorative uses are, of course, enormous; yet decorative painting is not an independent art, but merely a branch of architecture. The attempt to eliminate all subject matter from painting is doomed to failure, and the so-called "pure form" is but a chimera. Upon a plane surface the only pure form—that is, the only form exhibiting a cohesion between its parts, such as would declare it to possess a separate being of its own apart from that of him who made it—is a geometrical pattern. Post-Impressionists are fond of criticising those painters whose pictures have subjects apparently oblivious of the fact that their own paintings, at least such of them as are at all intelligible invariably have subjects, and exceedingly stupid and undignified subjects many of them are. Even architecture, which has no element of representation at all is not pure form; for every building, although it has to comply with certain laws of æsthetics, has also a social content without which it would be devoid of vitality, and would, in fact, have some of the characteristics of a stuffed animal.

Rather than attempt to eliminate all subject matter from painting, it is desirable to obtain a knowledge of what kind of subject is of sufficient universality to be embodied in a decoration. For besides the peculiar methods of composition and technique that are appropriate to a decoration, there is also such a thing as a decorative subject. We can agree with Mr. Clive Bell that didactic, historical, anecdotal, or "problem" pictures are all unsuitable.

Mr. Clive Bell has very little to tell us of those "significant forms" which, according to him, are not only the means of expression but expression itself. The verb "to signify" being transitive—not intransitive, as Mr. Bell appears to assume—we ask him "Significant of what?" and he has no answer. Perhaps this can be explained by the fact that he believes in the emotional theory of æsthetics. He says: "Why do certain arrangements and combinations of form move us so strangely? For æsthetics it suffices that they do move us; to all further inquiries of the tedious and stupid it can be replied that, however queer these things may be, they are no queerer than anything else in this incredibly queer universe"; and again he says that "any system of æsthetics which pretends to be based upon some objective truth is so palpably ridiculous as not to be worth discussing. We have no other means of recognising a work of art than our feeling for it. The objects that provoke æsthetic emotion vary with each individual. Æsthetic judgments are, as the saying goes, matters of taste, and about taste, as everyone is proud to admit, there is no disputing." We reply that about taste there must always be a disputing, for there is good taste and bad taste, and these are not of equal value; and there is no such thing as criticism unless there is a standard of judgment, and no standard of judgment is possible unless artists can apprehend and formulate impersonal canons of design which, of course, must be based upon "some objective truth."

Architects and town-planners have a great advantage over painters in that, being seldom allowed to forget that they are the servants of society, they have to give expression in their streets and buildings not to their own character but to the character of society. Hence, they are less apt to imagine that the whole æsthetic world revolves around their own personalities.

A. T. E.

Terrors of Bridges.

IT is distinctly encouraging to find anyone not an architect taking an interest in the æsthetic appearance of bridges. Mr. C. P. Trevelyan, M.P., has put heart in us by his bright but all too brief observations on the vicissitudes of bridges in Cumberland, of whose County Council he is a distinguished member. Discussion on a proposed new bridge over the Tweed at Berwick prompted Mr. Trevelyan to remark that he should have the strongest objection to the old bridge being tampered with. It is very fitting that Mr. Trevelyan should defend the bridge, if, as may be surmised, he is a kinsman of Macaulay, who, one seems to remember, wrote something sympathetic about "how Horatius kept the bridge in the brave days of old." Mr. Trevelyan cited the hard case of a bridge in the county that, he said, "had been made a terror to everyone except the blind." On taking thought upon the known tendency to blasphemy of terrible buildings, which, as some sensitive soul has said, "swear at you as you pass," he might also in fairness have excepted the deaf. At any rate, it is a hopeful sign that his protest did not go unheeded, for we read that "after further discussion the paragraph relating to alterations to several bridges was withdrawn." Knowing nothing at all of the bridge to which Mr. Trevelyan referred, we are unable to say whether or not his judgment upon it was just; but we are only too well aware that local authorities, when they ake upon themselves to "throw a bridge over a river," or, like Cæsar, "to join a river with a bridge"—unhappy phrases both, but a better expression is yet o seek—they care vastly more for commodity than for amenity and thereby ruin many a riparian vista. This is spoken of comparatively small bridges. Those hat are so big as to propound problems to the engineer are, like the Forth Bridge, in a category of their own. They are impressive by their magnitude, and are on some hands held to "need not the foreign aid of ornament." A bridge of this character is in conemplation for New York. It is to cross the Hudson, to unite New York with New Jersey, and is, of course, to be "the biggest bridge n the world," and is to cost the biggest price—£8,250,000. Towers nearly as high as the Tour Eiffel are talked of: for they are to rise 550 ft. bove the water and to delve 250 ft. beneath it, as the bridge's deck, which will be 200 ft. wide, must be at a eight sufficient to permit of the passage of the tallest cean liners. A total length of a mile and a half including approaches) will leave it shorter by some 78 ft. than the Forth Bridge, which, with its pproaches, is 8,098½ ft. long. This consideration will not daunt our American friends in their heroic enterprise. They will be very well satisfied to know that, anyhow, their Brobdingnagian bridge will be quite out of scale with all the rest of "the works of man," if not with the entire scheme of creation.

Versatility.

VERSATILITY in a man or a firm is often praiseworthy. Among architects especially we welcome the quality for this reason, if for no other, that it has been characteristic of a good many geniuses in the past; indeed, the hall-mark of the Renaissance was the infinite variety of its individual artists. But there is versatility and versatility, and enterprise can occasionally be too enterprising. We are moved to this reflection by a newspaper cutting, which a correspondent has kindly sent us as being of interest to the architectural profession in general. The matter referred to is a prosecution instituted by the Law Society against a defendant alleged to have pretended to be a solicitor, and the bench, after hearing the case, dismissed it on the ground that there was no intention of wrongdoing. Doubtless this was a right and proper verdict—but what interests us most was not the fact of his innocence in this respect, but the description of what exactly his professional calling consisted of. It was given in the heading to a letter produced in evidence, thus: "Messrs. ——, architects and surveyors, civil sanitary engineers, accountants and public auditors, auctioneers and valuers, house, land, and estate agents, commission agents, insurance brokers, and agents, shipping and tourist agents, theatre ticket library, etc., etc." As a witness on the other side admitted, this heading described the defendant as "everything but a solicitor." The Law Society, however, can at least console themselves with the reflection that the dignity of their profession is still safeguarded by the statute under which this action was instituted, whereas the dignity of the many other professions concerned has no such kindly legal protection.

Conflicting Building Regulations.

A LEGAL point of considerable importance to the builders of schools, especially of schools in London, was carried to appeal last week. Messrs. Holliday and Greenwood, the contractors, had been summoned and convicted for failing to give notice to the district surveyor of their intention to build a school in Walworth for the London County Council, and in appealing against this conviction their counsel contended that, notwithstanding the provision of section 145 of the London Building Act, the Council and their builders were exempted from giving notice by the terms of section 3 of the Education Act, 1911, provided that the schools were built in accordance with the regulations of the Board of Education. In passing, it is worth while to note that here we get yet another example of the glorious muddle and the harassing uncertainty that arise for want of codification of the law, of which various Acts, or sections of Acts, are sometimes directly in conflict: the Building Act says one thing, the Education Act another. Inability to codify our chaotic laws is one of our national failings; and in giving judgment Mr. Justice Channell, perhaps unconsciously, indicated another when he said that "the point was one of substantial difficulty when we come to apply the words of section 3 of the Act of 1911 to the provisions of section 145 of the London Building Act. If those words were quite clear, of course the policy of the Act would be an irrelevant consideration." Such a naïve confession lends considerable force to Goethe's remark that we English are a race of pedants, devoted to points of law but indifferent to justice. One would have thought that in the policy or intention of an Act must be an essential consideration, overriding all the possibilities of misapplication of the mere clumsy verbiage. In the present instance, however, common-sense happened to coincide with legal precedent, and Messrs. Holliday and Greenwood's appeal was allowed. To see the London County Council being summoned by its own officials for supposed breaches of its own regulations may have been originally a very enjoyable joke; but it has palled by too frequent repetition.

Overhanging Eaves.

URBAN District Councils provide much matter for mirth, as well as some for rather serious reflection. Instances of both kinds were provided in a discussion on "the impudent and high-handed action" of putting up eaves to a Liberal club; such eaves abutting on the town-hall property. Whether the strength of the expression was due to a pedantic sense of legality, or to the complexion of the club, was cast in doubt by a remark of the chairman's, that "he hoped the matter would be discussed without party feeling." One might have thought that eaves were elevated to a serener atmosphere than, for instance, the questions of sewage, out of which, before now, it has been found possible to make political capital. That Norbury bricks were freely thrown about to the same end is a matter of history. But it is very gratifying to record that, in the instance under notice, common-sense prevailed; although Mr. A said Mr. B "seemed to have lost his head," and Mr. B spiritedly rose to the occasion with "You will lose yours if you are not civil," which brilliant repartee we understand to be the sound form of words in such case made and provided. Apart from its ethical and moral value as an illustration of the high tone of rural district council debate, the discussion brings out a point of considerable practical interest. Where a wall marks the building line, anything that overhangs it trespasses on the rights of the adjoining owner, who, if he is cantankerous, may insist on its removal; although, if he goes to law about it, he may very probably find that the court will not favour this drastic remedy, but will order the defendant to pay a small quit-rent as an acknowledgment of the trespass, and to give an undertaking to remove the obstruction when due occasion is shown. Evidently aware of this practice, the Liberal club made formal acknowledgment of the rights of the council, and offered to pay a shilling a year for its eaves. Very sensibly, the council accepted this offer, thus placing itself in a distinctly more favourable light than the local authority that, as reported in the JOURNAL some few months ago, went to law in a similar case, and secured an order for cutting back the eaves and spoiling the building. In that case, the court seemed oblivious to the sweet reasonableness of the quit-rent solution of a problem that is of sufficiently common occurrence to make precedent valuable.

The London Lockout.

YESTERDAY (Tuesday) the Administrative Committee of the National Federation of Building Trades Employers of Great Britain and Ireland met to consider the London dispute in its bearings on the trade in general, but the result of their deliberations was not known at the time of going to press. It may be supposed that the question of a general lockout was discussed, and that the Committee would take into account a suggestion that the dispute should be submitted to the arbitration of the National Board of Conciliation. This Board has been hitherto so successful in dealing with disputes as to warrant the hope of speedy settlement of the present trouble on terms that will leave neither party profoundly dissatisfied. This consummation is the more anxiously desired since the only perceptible alternative to it is a general lockout, which would paralyse trade throughout the country at a season when building activity should be daily gathering momentum.

THE PLATES.

The Garibaldi Gate, Milan.

THIS is one of the newer arches in Milan, and, as its name signifies, was erected to commemorate th great Italian patriot. As a Neo-Grec incarnation of the Roman triumphal arch it is a handsome and an entirely successful piece of work, nicely in harmony with the surrounding architecture. The name of th architect is unknown to us.

Compiègne: The Vestibule. Jacques-Ange Gabriel Architect.

We continue in this plate the series of interiors o Compiègne Palace, for which the best known membe of the Gabriel family was responsible. The vestibule or, as it is sometimes called, the Salle des Colonnes, i not only a fine Greek design, but an ideal setting fo the marble sculpture it houses. The arch treatment i especially noteworthy.

Student's Drawing. Rome Scholarship in Architecture: An Art Gallery in a Public Park. B G. R. F. Cole.

Mr. Cole's drawing has already been discussed i the JOURNAL, in connection with the recent exhibitio of Prix de Rome drawings at South Kensington. W are glad to reproduce it as a plate, not only an accoun of the exemplary fineness of its detail, but because it i interesting to compare it with the pair of othe Students' Drawings published in this issue, whic belong to the Beaux-Arts and the early 'seventies, an to note the strength of the artistic tradition that unite the two.

Students' Drawings. Designs for a Concert Hal By M. L. Mace (upper) and M. Adrien Chance (lower).

These two sets of drawings and plans, whic obtained first and second mention respectively in th Concours Achille-Le Clerc of 1872, are excellen examples of highly talented architectural draughtsme of the day. M. Mace's design shows, rather interestingly, the employment of the flattish dome, to-day i some vogue in the architecture of public buildings.

Cottingham's Designs for Ironwork: Guards fo Shop Windows.

These three designs for shop-window guards sho a wealth of inventiveness in the application of flora and geometric patterns to a class of cast-iron wor which Cottingham made peculiarly his own. It will b noted that he has introduced an angel as a motive int the design at the foot of the page, but he has worke the lines of the figure and the wings so adroitly into th general pattern of his decoration that this featur remains, as was intended, a mere artistic abstractio A clumsier hand would have made of it an incongruity

"Coolderry," Lapworth, Warwickshire. Alan Brac Architect.

This house is faced with brindled Staffordshire re bricks, 2 ins. thick, and cement rough-cast, the roof being covered with hand-made tiles. The contracto was Mr. C. Bryant, of Birmingham, and Messrs. Harvey and Ashby, of the same town, were responsible fo the leaded lights and glazing throughout.

The Palais de Justice, Brussels: Front Elevation. I Poelaert, Architect.

Poelaert's magnificent building is doubtless wel known to our readers, but not the very remarkabl detailed drawing of the front elevation which we publish in this issue as a double plate. The Palais d Justice was begun in 1866 and completed in later year at a cost exceeding £1,750,000. The central featur is of course the dome—in itself a monument of constructional and æsthetic interest—but the detail of th entrance gate and of the right and left wings of th building is astonishingly varied and attractive. Th architecture is monumental in the truest sense.

HERE AND THERE.

' NO London street more fully merits the epithet of 'historical' than that which leads from Trafalgar Square to St. Margaret's Churchyard. Beginning at Charing Cross, it continues as Whitehall and ends as Parliament Street. Its brief course of half a mile is crowded with associations. From the King's Mews, where the Plantagenets kept their falcons and the Tudors their horses, past the monument of Nelson and the site, near the settlement of the Middle Saxon Charings, of the cross of Queen Eleanor and the tatue of Charles I., we reach the lodgings of the Scottish kings and the outskirts of Wolsey's proud palace. The still prouder design which Inigo Jones nade for James I. is commemorated in the Banqueting House, before which James's son lost his head, and by he Horse Guards, in the Tilt Yard opposite; while the ennis Court and the Cockpit remind us of 'Oliver, 'rotector,' and of George, Duke of Albemarle. On he same side was Wolsey's Treasury, and here, from he days of Henry VIII., has been, with but few interals, the headquarters of the government of the kingom."

As a preface to my present subject it would be diffiult to hap upon anything more felicitous than this pitome by the late Mr. Loftie, who possessed the gift f imparting his great knowledge of London in such an ngaging fashion that the reader's interest must ever be rrested. It is certainly rather dramatic, that peep own Whitehall from King Charles's statue, especially hen a kindly mist softens the raw outlines of buildings the immediate foreground. Since Regent Street has een invaded by the Goths, this must be counted as ondon's great thoroughfare, a street whose generous idth gives it an air of importance, as contrasted with ie mean roadway which, under different names, palitates with 'buses from Charing Cross to the Bank.

Secure on the island which is our present vantageoint, we can survey at ease Le Sueur's bronze orse and rider, set bravely on its stone pedesl. No monument in London has had more id about it than this one, so I will not ilarge on the vicissitudes of its history, contenting yself with the bare chronicle that, after having een secreted underground, it was set up in its present osition in 1676, practically on the site of the original ross (now represented some hundred yards away by . M. Barry's concoction in the hotel forecourt). It is truly admirable statue, and the stone pedestal is just good as the bronze figure. This pedestal, with its irvings, has been ascribed to Grinling Gibbons, who ust have had a very busy time indeed after his arrival om Holland, if one accepts all the attributions that e showered upon him. Whenever a piece of elabote carving is in question it is the proper thing to dub rinling Gibbons as the author of it; just as your guide, hen conducting you through the cellars of any old iilding, will assuredly inform you that these formed irt of the ancient monastery that formerly occupied e site. King Charles's pedestal, as a matter of fact, the work of Joshua Marshall, Master Mason to the rown, and a right good piece of work it is. After ore than two centuries of exposure it is now deeply tted and worn; the boy figures that support the cutcheon are minus an arm or two, the unicorn has st his nose and his horn, and the royal lion glares ldly out of concretions of carbonated soot that will entually destroy him; but the whole is a most elent composition, of a lovely tone, and with high-lights d shadows mingled entrancingly.

* * * *

In considering the thoroughfare which stretches fore us we may notice first that, although custom appropriating the term "Whitehall" for the whole igth of the street, down to Parliament Square, Charing Cross extends as far as the Admiralty screen, and Parliament Street claims about an equal length at the other end. The architecture is various. Drummond's Bank, at the commencement of the thoroughfare, on the west side, need not detain us long. It is a sort of Palladian hybrid, and the architect was not in a happy mood when he conceived it. I suppose a chunk of the bank will be taken off now that the authorities concerned have settled their differences about the opening up of the space in front of Sir Aston Webb's archway. Its entire demolition would not move me to any degree of regret. I would, indeed, that a finer building might be preserved in the clearance, *i.e.*, the Phœnix Assurance Office on the other side of the opening—a beautiful effort by Cockerell, though sadly marred by advertisement signs.

On the opposite side of the street is Canada's shop window, where visions of wheat confront the passer-by. The building itself—by Messrs. Hart and Waterhouse—suffers from a common failing of modern architecture, in that it has too many elements jostling one another on the façade, destroying all sense of repose. Next door to it is Cox's Bank, by Ewan Christian—a building notable for its disquieting window treatment: all the angles are rounded like railway carriage windows, and plate glass holds a horrid sway. This bank is at the corner of Craig's Court, wherein a relic of the eighteenth century—Harrington House—is snugly ensconced. On the opposite side of the entrance to the court a neat piece of rebuilding has been carried out to the design of Mr. J. S. Gibson. Of "The Old Shades" and block of office premises adjoining, by Messrs. Treadwell and Martin, one is unable to speak in commendable terms, the stonework being cut about as though it were cheese. Facing these modern buildings is a miscellaneous collection of old houses, which look utterly destitute, and would seem to be in considerable danger of collapse. Though dull and decrepit, however, they do not affront the eye like some of their modern neighbours, and they display balconies which are extremely elegant examples of Georgian light ironwork.

* * * *

We are now at the Admiralty, where we get a fine peep of Ripley's work through Robert Adam's screen. It is the usual thing to say that Ripley's work is ponderous; but the great porch with its four tall stone columns has always struck me as impressive, while in the screen there is any amount of sturdy vigour—*pace* the critics of the trafficking Scotch architect. Opposite is a very creditable example of modern design, the Woods and Forests building, by Mr. John Murray. It is quite the best piece of modern work in the street, and fifty years hence, when it has weathered down, will have a very noble appearance. Its proportions are skilfully managed and its enrichments well disposed. It is, to my mind, a far more successful building than the new War Office next door to it. This latter is the sort of building that looks very captivating in an Academy perspective, but, excepting the fine colonnade in the centre, I can never enthuse over it. It is, indeed, in my opinion, a very mediocre piece of work, by the late Mr. William Young, of Glasgow Municipal Buildings fame. In hastening to refer to it, however, we have jumped Great Scotland Yard, which, though now redolent of policemen, is part of the area covered by the town house which was built for the Kings of Scotland when they came to attend the English Parliament as Barons of the Realm. (It was a ruin in the time of Elizabeth.)

This brings us about half-way down the thoroughfare, the remainder of which must be dealt with next week.

UBIQUE.

KING'S CROSS IMPROVEMENT COMPETITION.

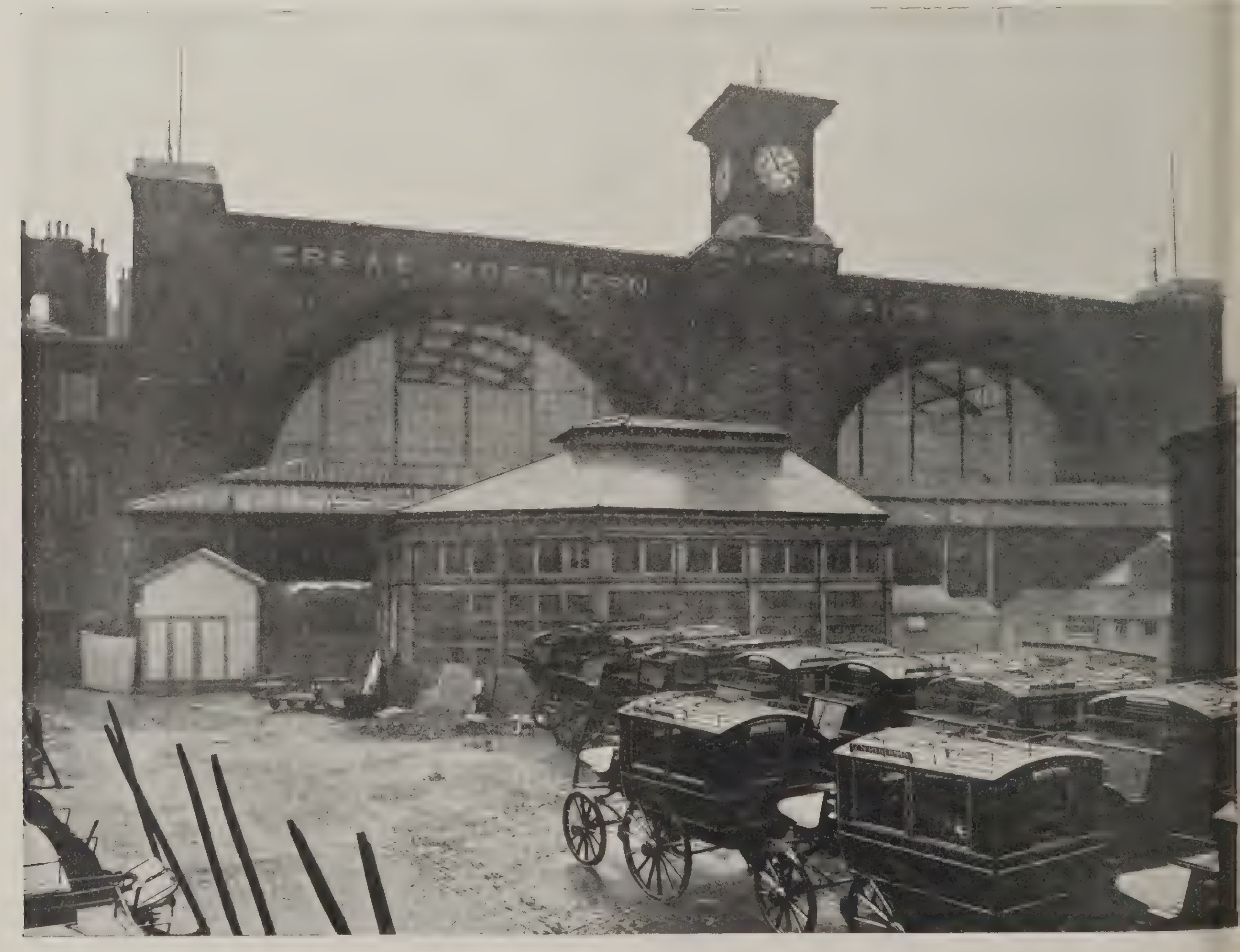
FOLLOWING the announcement in last week's issue of THE ARCHITECTS' AND BUILDERS' JOURNAL, the editors have asked Mr. A. E. Richardson, F.R.I.B.A., to act as assessor in this competition, and to draw up the terms of the conditions, which are published hereunder. It should be borne in mind that the existing design of the King's Cross Terminal is a masterly exposition of architectural engineering, both as regards the simplicity of the planning arrangements and direct expression externally. The comparatively naked treatment of the front to Euston Road, built of stock brick with stone dressings, owes its importance to the scale and proportion of the component masses; the arrangement does not call for meretricious ornamentation or the introduction of features to destroy the vigorous character of the structure. Yet a careful study of the façade will reveal the fact that a great improvement could be effected by a slight readjustment at a comparatively small cost. Competitors are advised to give their attention to the design of an improvement to the iron and glass shelter over the main approach road, and to consider the screening of the concourse, which is at present open, and, further, to enhance the general appearance of the design. The curtain wind screens and the existing surface of stock brick must remain unaltered. Schemes suggesting terra-cotta, stucco, or tiling, for the purpose of unnecessary embellishment, will be disqualified. After further consideration it has been decided to increase the cost of the assumed expenditure by £1,000, £500 being allowed for architectural improvement and £1,000 for the addition to and alteration of the present shelter. Another feature whic should receive equal consideration, although the cos need not be considered, is the razing of the heterogeneous buildings which now disfigure the foregroun This would involve the making of a new station for th Underground below the level of the pavement, bu beyond the treatment of the open space and approach to the station, from the upper to the lower level, competitors need not enter into the minutiæ of this part c the problem. A visit to the building and a study of th approaches and the circulation of traffic is recommended; at the same time a study of the structure ca be made and the weak point in the composition recog nised. It cannot be urged too strongly that th application of ornament of any description would onl detract from the dignity of the building.

The Drawings Required Comprise:

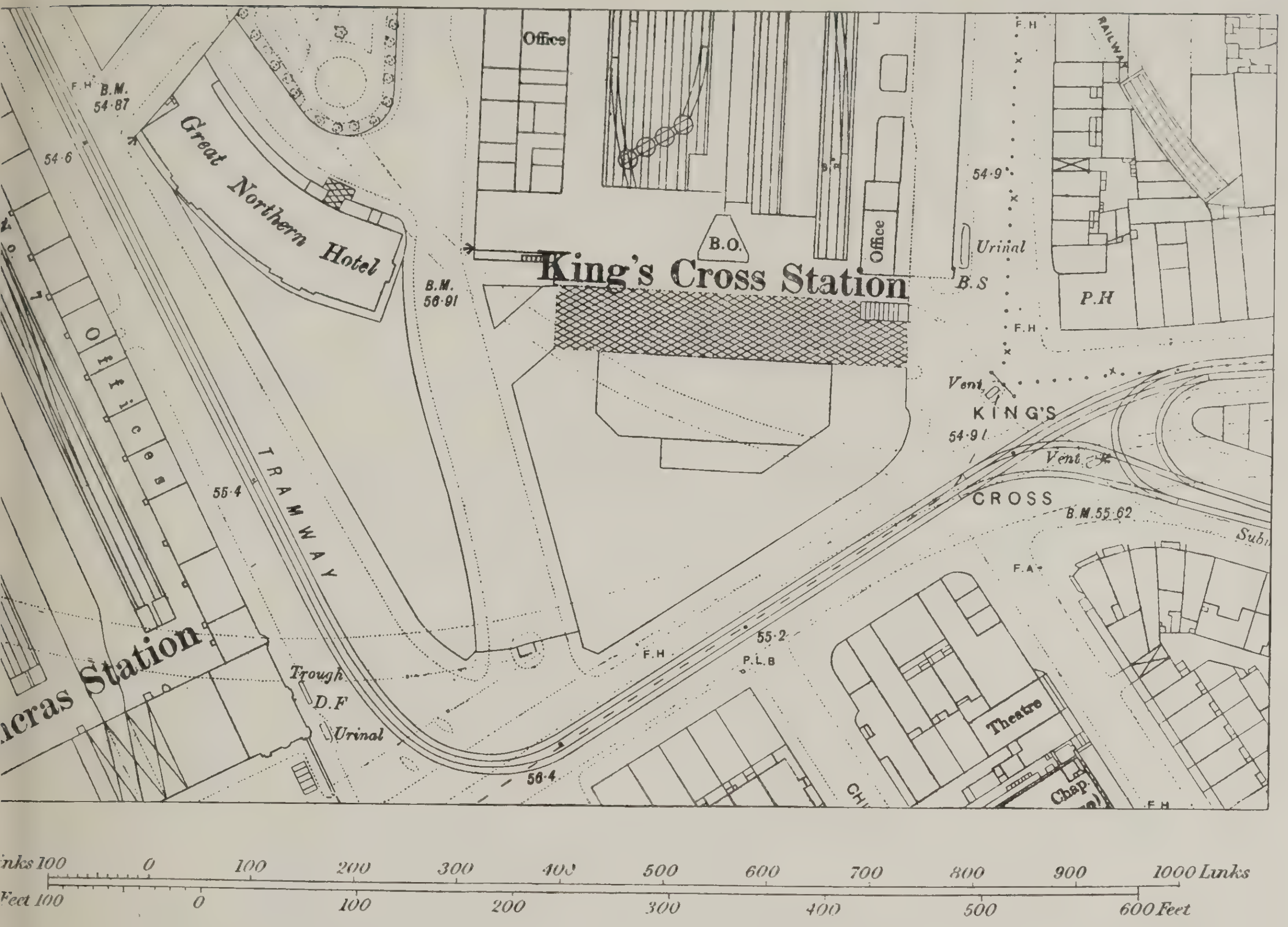
1. Plan to a scale at least three times that of th ordnance, showing the proposed readjustment of th foreground and approaches to the station, as well as th means of entrance to and exit from the Undergroun Station.

2. Diagram elevation of the main façade, showin the suggested architectural improvement. The sca of the diagram is left to the discretion of competitor but the published sketch in the current issue can b followed or enlarged.

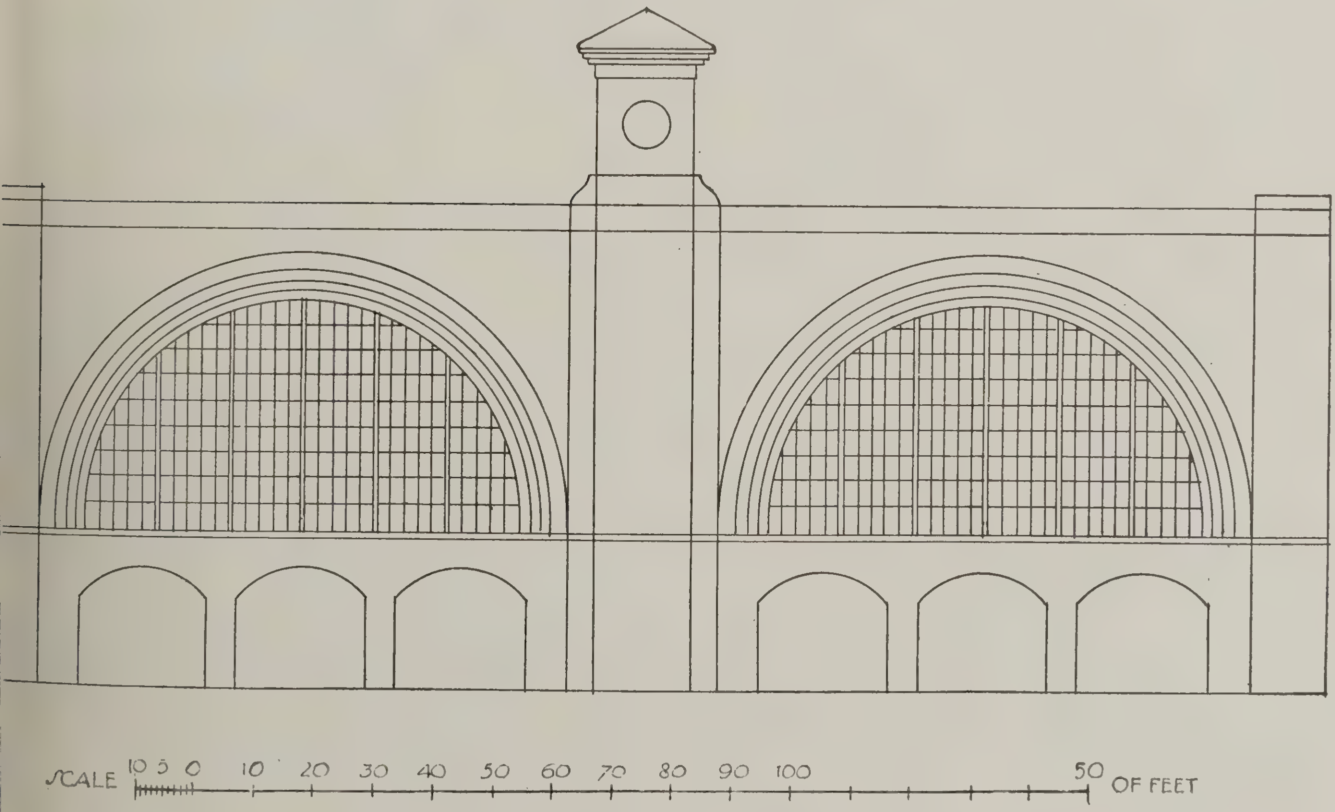
3. A freehand perspective sketch showing the form tion of the space in front and the improvement to th façade. The size of this drawing, as well as the su mission of such supplementary sketches as the con



KING'S CROSS RAILWAY STATION: GENERAL VIEW.



KING'S CROSS RAILWAY STATION: ORDNANCE PLAN.



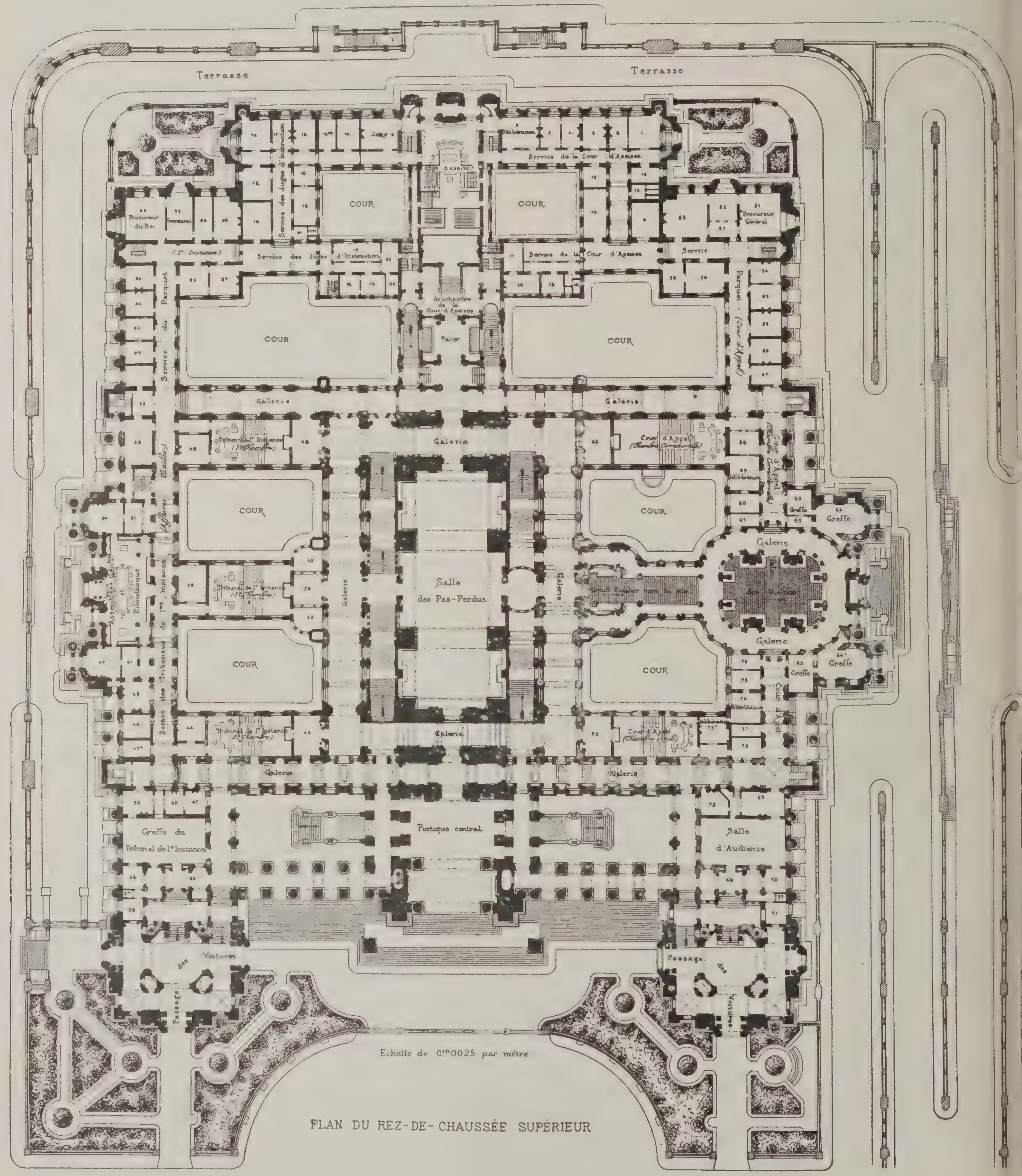
KING'S CROSS RAILWAY STATION: SKETCH OF FRONT ELEVATION.

petitor may think necessary to explain his design, is left optional.

4. The drawings and sketches can be finished either in pen and ink, pencil, or black and white. Coloured drawings are not desired. The competition closes on Wednesday, April 8th. All drawings, together with a sealed envelope containing the name and address of the author, addressed to Technical Journals, Limited, Caxton House, Westminster, and plainly marked "King's Cross Competition," should be delivered carriage paid, not later than midday on that day. The result will be announced in the following issue of THE ARCHITECTS' AND BUILDERS' JOURNAL.

5. No person employed in the office of the assesso will be eligible to compete, and any competitor com municating with the assessor will be disqualified. Al questions relating to the competition must reach thes offices not later than Friday morning, March 13th, an will be answered in the pages of the following issue.

6. The premiums are as follows: The author of th design placed first will receive £5, the second £3, an the third £2. The editor reserves the right to repro duce any of the designs submitted whether successfu or otherwise. The full report of the assessor will b published, together with the designs to which award are made.



THE PALAIS DE JUSTICE, BRUSSELS: PLAN OF PRINCIPAL FLOOR. J. POELAERT, ARCHITECT.

(*See Double-page Supplement, and page 168.*)

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or opinions expressed by correspondents, who are asked to be brief, and to write on one side only of the paper.

The Neglect of the Sculptor.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—In your appreciative note on my second lecture on "The Relation of Industry and Art," before the Royal Society of Arts, you comment on the passage in which I asked: "In how many cases were the sculptures in the pediments, the figures in the niches, or the friezes in relief, the work of the leading sculptor of the day?" You suggest that "sculptors" in the plural is what I intended. You are quite right in this suggestion, and I heartily agree with your remarks on that question. The blind following of fashion in the predominance of one artist only among a number of peers of equal, though different, excellence is much to be deplored. My remarks were really meant for the encouragement and support of our best sculptors, painters, and decorative artists. It appears to me that, as regards the point I was insisting upon, sculpture was especially neglected in our country. May I add that I also chiefly had in view the erection of great buildings by the State or public bodies, upon whom, to my mind, the duty of encouraging the best national art chiefly devolves. But there also exist individuals of great wealth to whom the economy of the proportionate sum required for the decoration of the mansions they erect, provided the whole building stood forth as one of exceptional beauty and excellence, would not act as a deterrent for engaging the best artists, if the architect insisted upon recommending their employment.

CHAS. WALDSTEIN.

Direction of Floor Boards.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—In your issue of February 11th I notice a reply to an inquiry from F. C. G. (Preston) which does not accord with the usual practice. I believe that experts in gymnasium construction invariably lay the boards parallel to the short side of the room, the reason being that in certain exercises there would be a slight danger of splinters running into the foot if the boards ran the long way of the room. F.R.I.B.A.

R.I.B.A. Testimonies of Study.

To the Editors of THE ARCHITECTS' AND BUILDERS JOURNAL.

SIRS,—The letter from "Student" must have been read with great astonishment by many of his fellow students. Surely the students should feel grateful for the scope allowed by the R.I.B.A. examiners in setting the subjects of the various problems in the mánner described by "Student."

A student is, presumably, not so competent as a more experienced member of the profession, but if the subjects were set as suggested by "Student" they would prove to be as complex as those problems which tax the powers of the most able members of the profession, and one would suppose that the examiners have purposely abstained from setting conditions the very nature of which would be calculated to stifle freedom of handling.

"Student" asserts that "of course we are expected to 'crib' from some existing example," but if all the particulars "Student" asks for were given one fears that a large number of the solutions would be "cribbed" from the existing example which most nearly approximates to those particulars.

The present series of problems, and especially the subject set in the last examination, and the manner in which they are set, has been the cause of rejoicing to a vast number of students, and the writer believes that if improvement is possible at all it might be achieved by discontinuing the practice of sending candidates the subject for the examination beforehand, as under the present system candidates are sorely tempted to look up examples of similar buildings, and by so doing are liable to become wedded to some scheme which interferes with the free exercise of pure design in the examination when the full particulars are in their possession.

ANOTHER STUDENT.

Cheap Cottages.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—With all due respect to Mr. Conrad B. Willocks, I should like to remark on his cottage published in your issue of February 11th. The E.C. is most certainly badly placed and would be an unpleasant apartment, also the wood-framed partitions here advocate for vermin. I should like to see a 6 ft. by 4 ft. bed placed in bedroom No. 2.

J. B. MCINNES.

[The above letter was sent to Mr. Willcocks, who has returned it with the following reply.]

SIRS,—In answer to Mr. J. B. McInnes' criticism of my cottage at Merrow, in which I was much interested, I cannot agree that the E.C. is badly placed, being conveniently near the back door and separated from the larder by the fuel house. As walls and ceiling are "granite" plastered, I do not think it will prove the unpleasant apartment Mr. McInnes fears.

The small bedroom was intended for one single or two children's beds, but could contain a 6 ft. by 4 ft. bedstead in case of necessity. The cottage was built to show that reasonable accommodation could be given for £100, and, although the cost somewhat exceeded this—the final price was £107—it could have been kept to £100 by the omission of sundry fittings, etc.

However, the proof of the pudding is in the eating. The tenant is delighted with the result.

CONRAD B. WILLCOCKS.

THE JOURNAL ILLUSTRATIONS.

AN important feature of this JOURNAL being the illustration of current architecture, the Editors are always prepared to consider photographs of recent work that architects may care to submit with a view to reproduction. When the illustrations are given as full-page plates, twenty-five copies on art paper are regularly sent to the authors concerned. The Editors would like to point out that many conditions, which may not occur to architects, cover the selection of illustrations for a technical journal, and that when photographs are not used it does not necessarily imply that the work is not worthy of publication: it may happen that at the moment the illustrations do not fit in with the general scheme. All unsuitable material is promptly returned.

For convenience in filing plates for future reference, a special portfolio has been prepared. All readers having, or placing, a standing order with a newsagent to supply the JOURNAL each week for twelve months can secure one of these portfolios free of all cost, by sending in an application to our offices at Caxton House, Westminster. Extra portfolios can be obtained price 1s. each.

As the above offer will shortly be withdrawn, all those who have not yet made application for a free portfolio are urged to do so at once.

HEATING ARRANGEMENTS.—I.

[*Specially Contributed.*]

IN my novitiate all that seemed necessary was to have three sets of sunprints coloured up and sent out with a letter which ran:

"Dear Sirs,—

"Kindly give me a price in limited competition for heating the building shown on the enclosed drawings, including everything necessary to complete the work to my entire satisfaction."

The result was electrical. Instead of tenders I received a nightmare of questions: What system did I propose; what was the range of temperature to be dealt with; were the fireplaces shown to be reckoned; was builder's work to be included; were pipes to be wrought or cast and run in trenches or above floors; were valves wanted on all the radiators; would I state the type of boiler and its size to prevent unscrupulous undercutting; were fresh air inlets wanted and how many; could not the flue shown be enlarged; were the pipes and boiler to be lagged; was any painting to be included? and so the tale continued.

"These men," I said, "do not know their business," but while I spoke my eyes fell on a sheet of answers to questions put in an architectural competition, and a small voice said: "Would you have gone in without these answers?" and conscience said "No." So I consulted works on heating, and, finding that the authors allow their technical enthusiasm to carry them far beyond the ken or requirements of any architect, which race they thus successfully alienate, I venture to set down in lay fashion a few simple matters on this subject.

The systems of heating buildings may be classified as follows:

1. Hot air furnaces.
2. Hot water under low pressure by gravity.
3. Hot water under low pressure accelerated by self-contained means.
4. Hot water under low pressure accelerated by external mechanical means.
5. Hot water under high pressure.
6. Hot water on the calorifier system.
7. Steam at high pressure.
8. Steam under low pressure.
9. Steam at atmosphere pressure.
10. Steam under reduced pressure (vacuum steam).
11. Open grates, gas fires, and electric radiators, which, however, are excluded from this discussion.

(1) Hot Air Furnaces.

This very ancient form of heating is seldom used except in connection with the Plenum System of ventilation, and involves special construction in the building for its installation. External air is passed through pipes heated in a furnace, and delivered to the rooms by flues formed in floors and walls. The less metal and the more brick or terra-cotta in such flues the better. The system in straightforward cases is cheap to install, and efficient, particularly when the floors are of "fireproof" materials, as these get warm and slowly conduct the heat to the rooms. The upkeep in furnace renewal is considerable unless a very ample grate area is provided. The hollow terra-cotta floors of modern construction do, however, suggest that a revival of this system might be advantageously attempted in some cases, and the absence of pipes and fittings is certainly attractive.

(2) Hot Water Low Pressure.

This is the ordinary form of water heating, giving a temperature in efficient radiators of about 180 deg. F., the boiler being sunk below the lowest floor to be warmed; and it is worth noting, when this sinking presents difficulties, that different types of boilers vary considerably in height. The absence of any necessity for skilled or frequent attention and its safety make this system attractive. Usually the mains are in pairs (two-pipe system), with each radiator attached to both mains; but one main (one-pipe system) is sometimes used and is suitable for small buildings, and more suited to unavoidable "dips" than the former, as the water is perforce bound to move forward, though dips, of course, check its acceleration.

Another arrangement very useful in high buildings of moderate area is the "overhead" system, where the flow pipe is taken to the top of the building, the radiators being placed in the return pipe, and this obviates the necessity for air cocks on the radiators, since the expelled air escapes by the expansion pipe.

(3) Hot Water Low Pressure Accelerated Systems.

A great many attempts have been made to increase the rate of circulation of hot water with the object of increasing the available cubic space which can be profitably dealt with by hot water heating, decreasing the size of the necessary mains and branches, and rendering the arrangement of pipes less dependent upon levels, and many patents have been taken out for improvements in the gravity system, but these may be roughly divided into those which are self-contained and those which require mechanical power. The former depend upon the production of decreased pressure in the rising main, caused by the formation of steam in the water, or by a syphonic action and the production of a partial vacuum in a specially constructed section of the apparatus. The steam may be generated in the boiler and mixed with the flow water under suitable regulation, or it may be separately injected into the system. The systems involve the use of a special tank divided into compartments, or an automatic mercury valve or other features; and though anything dependent on mere boiler priming may be open to critisism of involving too much boiler attention to justify its adoption, there are several systems in use which have very considerable advantages, and admit of the boiler being placed in any convenient position, and not necessarily below the lowest floor to be heated.

(4) Accelerated Mechanical Systems.

In large buildings, especially those covering much ground, hot water installations are best aided by mechanical means. This usually takes the form of a centrifugal pump which either pulls the water along the return or pushes it along the flow pipe. This pump forms part of the main water circuit, and is placed in the boiler house, or preferably in an adjoining room or chamber where it will not be exposed to dust. Of course, some external source of power is required to drive such a pump, which is not always conveniently available, nor would the cost be justifiable for a very small installation. The extension of existing plant forms an instance of the value of this system, which may be regarded as analogous to raising the voltage in electric mains in order to increase their capacity, and an old inefficient system which it is not feasible to renew may be often rendered serviceable by the introduction of one of these accelerated systems which involve only local alterations.

(5) Hot Water under High Pressure.

The pressure in a hot water system will depend on the height of the expansion tank above the boiler, and may be considerable. For example, if the height of the tank is 40 ft. above the boiler the latter is subject to more than 15 lb. per square inch, so that many hot-water plants are under greater pressure than low pressure steam boilers. This additional pressure, though it may tend to find out poor joints in the systems, acts as a decided aid to circulation. It, moreover, raises the temperature of the water, and is so far advantageous.

Systems in which the actual head of water produces an appreciable increase o pressure over that of the atmosphere ar sometimes called medium pressure systems, but the term "high pressure ho water" is confined to the system in which water is completely sealed in pipe devoid of an expansion tank, often under pressure of as much as 500 lb. per squar inch and relying upon a safety valve. Thi system, a very old one, has no boile proper, the boiler consisting of a coil o pipe heated in a furnace. The temperature produced is high, and the pressure i beyond the capacity of ordinar radiators; hence pipes usually ⅞ in. diameter, which can easily be bent to an angle, are used both for mains and heating surface. Rapid in action owing to th small water content, this system has certain advantages, but the pipes need protection, as they cannot be safely touche and they must, under building regulation be kept three inches from all woodwork When exceptional temperatures are required, as in laundry drying room bakeries, Turkish baths, etc., this syste is very valuable, but has little vogue fo ordinary heating.

(6) Hot Water on the Calorifie System.

It occasionally happens that direct hea ing of water by a fire is not desirable. Th may arise, for example, through the impo sibility of placing a furnace in a positi assigned to the seat of the generation the heat, or because other available energ is required to be utilised in place of fue Such an instance may arise when was steam from boilers doing independe mechanical work is obtainable. T steam supply in such cases is led into cylinder containing a coil or parallel seri of pipes of copper or brass, forming pa of the circulating water system, but havi no opening to the cylinder. The water heated by the steam by conduction throu the walls of such coil or battery of tub The size of the "calorifier," as su cylinder is called, is a matter of simp calculation, since the area of the contain pipe surface must be such that it recei from the steam in condensing and cooli as much heat as the system is required to give out to the space to be warmed.

Steam Heating.

There are several forms of steam heating which possess certain features in common. Steam is a gas like air or coal gas, and remains so above 212 deg. F. Therefore, its circulation through any system is extremely rapid as compared with water. Hence steam systems are rapidly "up" provided the water in the boiler is kept hot, and they are equally soon "down." This form of heating is thus advantageous for intermittent work or for buildings covering a large area, such as institutions and public buildings, which may have a widely extended use for recurring limited periods. All steam systems require more attention, and, where the boiler generating the steam is part of the plant, larger and better lighted stoke-holes than hot water plant. Smaller pipes can be used for steam than for hot water; a 1½-in. main will often supply 200 ft. of radiation. Steam systems owe their efficiency, not only to the above considerations, but to the fact that the gas emits an extremely large quantity of heat when it condenses into water.

(7) STEAM AT HIGH PRESSURE.

By high pressure any pressure more than double that of the atmosphere, or more than about 15 lb. as registered by a gauge, s generally understood. Such use of steam is confined to factories and similar buildings where a steam supply generated for other purposes is usually available. The steam is conveyed by wrought-iron pipes, and steam traps are necessary to remove the condensed water. Such pipes must, of course, be protected as they are too hot to be touched safely, unless the heated area or part of it is below the boiler, when the condensed steam must be run to waste or pumped back into the boiler.

(8) STEAM AT LOW PRESSURE.

Low pressure steam usually between 5 and 10 lb. per square inch, is utilised for heating large buildings, but is not so economical as hot water unless the calls on the system are of a very intermittent nature. Steam traps are not used in this connection, the pipes being laid to a fall and the condensed water returned to the boiler (or run to waste) by gravity. A disadvantage of the system lies in the fact that regulating valves cannot be employed, so that each circuit must be used as a whole or not at all.

(9) STEAM AT ATMOSPHERE PRESSURE.

In this system the return pipe is permanently open to the air. Hence the pipes contain always a mixture of steam and hot water. There is, therefore, no (or only a nominal) pressure in the boiler and pipes, and their temperature is thus lower. Regulating valves can be applied, and the attendance on this system is less than for other steam plants.

In this category may be placed exhaust steam, that is, steam expelled after use from a boiler utilised for driving machinery or other independent purposes which may be available, thus rendering a separate source of energy for the heating plant unnecessary. The use of an oil separator is generally desirable when exhaust steam is employed.

(10) STEAM UNDER REDUCED PRESSURE.

"Vacuum steam," as this is called, forms a very excellent method of heating when the extent of the building justifies its introduction. The steam is generated in a boiler in the ordinary way, but in the circuit of the pipes and radiators (usually in the boiler house on the return main) is an exhaust pump which, by constantly sucking air and vapour from the circuit, maintains the internal pressure at considerably less than that of the air outside. This pump must, of course, be driven by power continuously supplied, and this may be done electrically or by other independent means, or by steam from the boiler supplying the heat to the system. Valves can be used in this system in the ordinary way, attached to radiators, but must be thoroughly efficient and of special type, and form one of the chief features of successful working; there are one or two well-recognised patent forms of valve. Usually both air and condensed water are removed in the same return pipe, but sometimes a small independent air-withdrawal line of pipe is employed. This system is more expensive in first cost and attendance and maintenance than a hot water system.

(*To be continued.*)

ENQUIRIES ANSWERED.

Stresses on Steel-Framed Tank Tower.

H. E. B. writes: "Kindly explain the correct method of ascertaining the stresses in the various members of the steel-framed gantry supporting cast-iron tank, as shown herewith, allowing for a full wind pressure on one side. This would not be enclosed."

—Fig. 1 being the tank and tower, the vertical loads will total, say, 48 tons, divided over four uprights $\frac{48}{4} = 12$ tons on each. Any side of the tank may be exposed to the wind pressure of, say, ½ cwt. per square foot; this will give a horizontal force of $\frac{15 \times 6 \times \frac{1}{2}}{20} = 2.25$ tons at top of tower, or $\frac{2.25}{2} = 1.125$ tons on each of the two side frames. The load diagram will then stand as shown by the framework and external force lines given in Fig. 2. Number the spaces as shown by the vertical figures, then draw the force polygon 1, 2, 3, 4, 6 shown in Fig. 3. Select a pole not level with point 2, draw vectors as shown by dotted lines. Then, beginning at top left-hand corner of frame in Fig. 2 draw the first line of the funicular polygon across space 2 parallel to line 2-pole, in Fig. 3, continue across parallel to 3-pole, to meet the horizontal line, from there parallel to 4-pole, to meet the vertical again. Now leave this point for a moment and go back to the commencement. Continue the funicular polygon parallel to 1-pole, to meet the horizontal line at base, and from there continue it parallel to 6-pole, to meet the left hand vertical. Join this with the loose end left on the other vertical and it will give the direction of 5-pole, for Fig. 3. The stress diagram can now be completed as in Fig. 3 and the stresses scaled off, when they will be found to be as shown by the small figures in Fig. 2. Note that all the members must be designed to sustain the maximum load as the wind veers round to another side. It will be found in practice that it is very difficult to get the lines truly parallel in Fig. 3 to make the figure

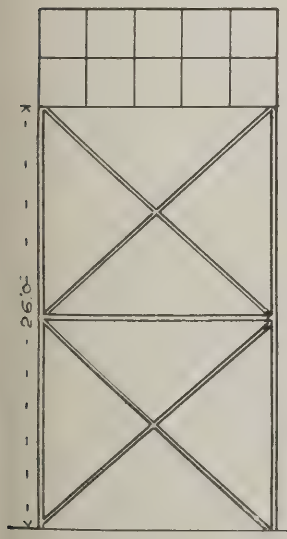


FIG. 1

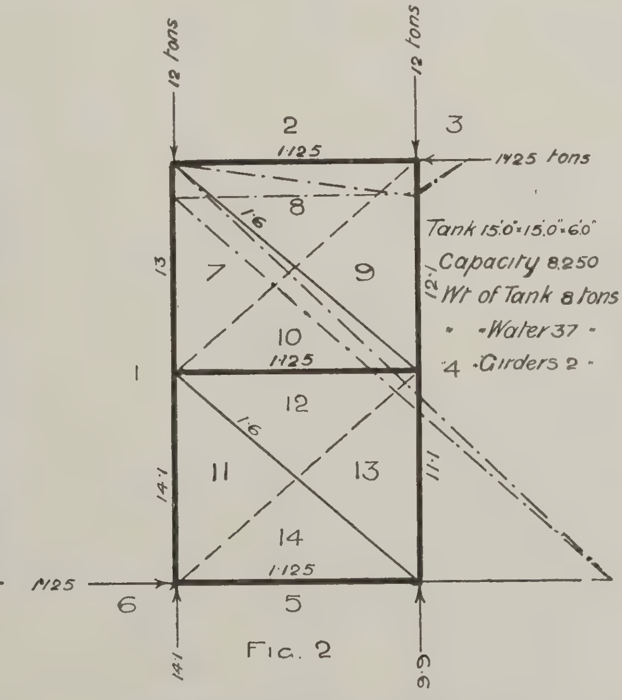


FIG. 2

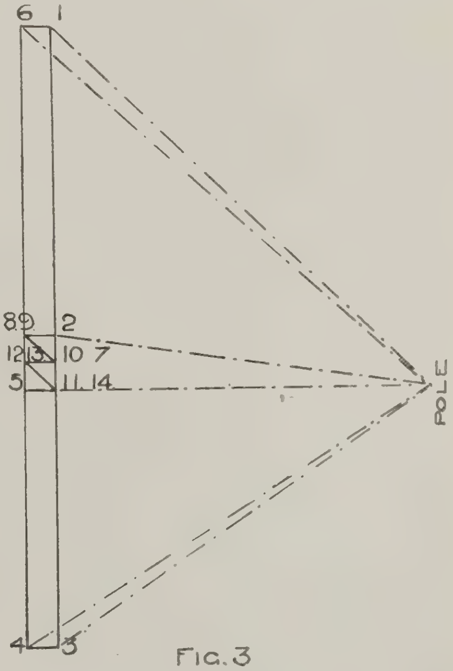


FIG. 3

STRESSES ON STEEL-FRAMED TANK TOWER.

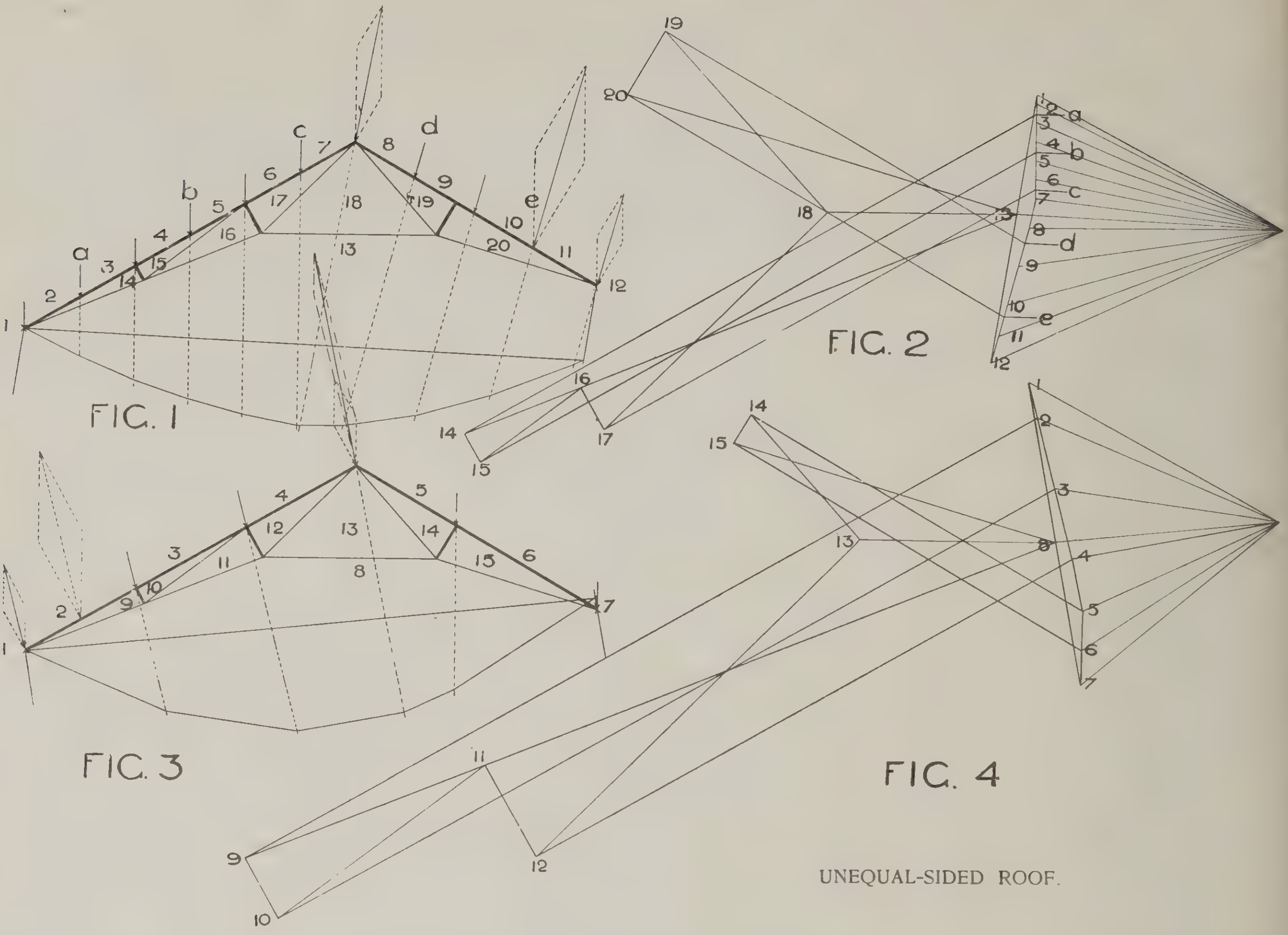


FIG. 1

FIG. 2

FIG. 3

FIG. 4

UNEQUAL-SIDED ROOF.

close properly, but it will be seen that 2—8 must be horizontal, 8—7 inclined, 10—12 horizontal, 12—11 inclined, 14—5 horizontal, all in known positions, and the stress diagram may therefore be constructed without a funicular polygon, but this was not evident at starting. Joining point 5 to the pole the parallelism of this line with the corresponding line of the funicular polygon will test the neatness of the work. Henry Adams.

Unequal-sided Roof.

A. L. writes: "The enclosed drawing shows rather an unusual form of truss, which I have found difficult to work out graphically. Please say whether you consider the truss generally correct and likely to prove efficient?"

—There is no more difficulty in working out this roof truss than an ordinary equal-sided truss, except that as the truss is unsymmetrical the wind must be taken first on one side and then on the other to find the maximum stresses in each member. The roof is badly designed, as a strut should come under each purlin, or, vice versa, a purlin should come over each strut only. First the external forces may be calculated, the frame diagram drawn as in Fig. 1, and the load line set down as in Fig. 2. Then the reaction of the loads upon each point of support may be calculated and set down upon Fig. 2 as *a b c d e*, being checked by the previously drawn loads 1 to 12. The next step is to select a pole on Fig. 2, draw the vectors, and parallel to these draw the funicular polygon on Fig. 1. The vectors may, if preferred, be drawn to the points *a b c d e* and the funicular polygon constructed upon the directions of these forces in Fig. 1. The closing line will give point 13; the reciprocal diagram can then be drawn as shown. Then, taking the wind on the other side of the roof, the frame diagram Fig. 3 may be drawn, and the stress diagram Fig. 4. The maximum stress in each member can be obtained by scaling from both diagrams, and the result will be the direct tension or compression. In addition to these stresses the principal rafters will be under bending moments due to the position of the loads, and the combined stresses must then be worked by the formula $\frac{W}{A}+\frac{M}{Z}$. Full instruction in this class of work may be obtained by studying "The Mechanics of Building Construction" (Longmans, 6s. net).

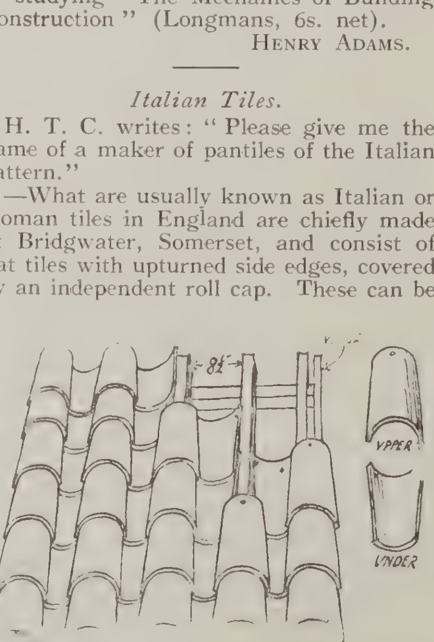
Henry Adams.

Italian Tiles.

H. T. C. writes: "Please give me the name of a maker of pantiles of the Italian pattern."

—What are usually known as Italian or Roman tiles in England are chiefly made at Bridgwater, Somerset, and consist of flat tiles with upturned side edges, covered by an independent roll cap. These can be obtained from the Somerset Trading Company, Ltd., Bridgwater. This firm also supplies a true Italian or Spanish tile which is much bolder in effect, and consists of alternate ridge and furrow tiles, as sketch. These tiles do not require any tiling laths to be used. The roof is constructed of 2 in. by 3 in. or 2 in. by 4 in rafters spaced 8½ in. apart in the clear The under tile lies between the rafters, to which it is securely fixed by a nail at each side; the upper tile covers the rafter, to which it is nailed, and clips the under tile on each side. Each tile is taper in length so that the valleys and ridges lap one another and form a fairly close fit, which is secure against rain or snowdrift. The length of the tiles is 14 in. They lie about 250 to a square, and weigh about 1 ton 15 cwt. per 1,000. Messrs. S. and E Collier, of Reading, also supply rather similar tiles, as used at the Berkshire Council offices, and the English "Roman" tiling can also be obtained from them.

G.



ITALIAN TILES.

Clamp-Burnt Bricks.

J. H. F. writes: "Kindly give the names of firms who manufacture bricks in clamps."

—There are many makers in the vicinity of London who supply clamp-burnt bricks Messrs. Smeed, Dean and Co., of Sittingbourne, Kent; Messrs. Pigott, of Edmonton, Middlesex; or Messrs. Nash, of Slough, Bucks, all supply the common London stock in all its grades. Surrey and Sussex also contribute their beautiful grey stocks, such as those of Messrs Mitchell, of Godalming; Messrs. Dawson and Co., Mendip Wharf, Battersea, as agents for a number of makers in Kent Essex, and Sussex, are often in a position to supply when individual fields are exhausted.

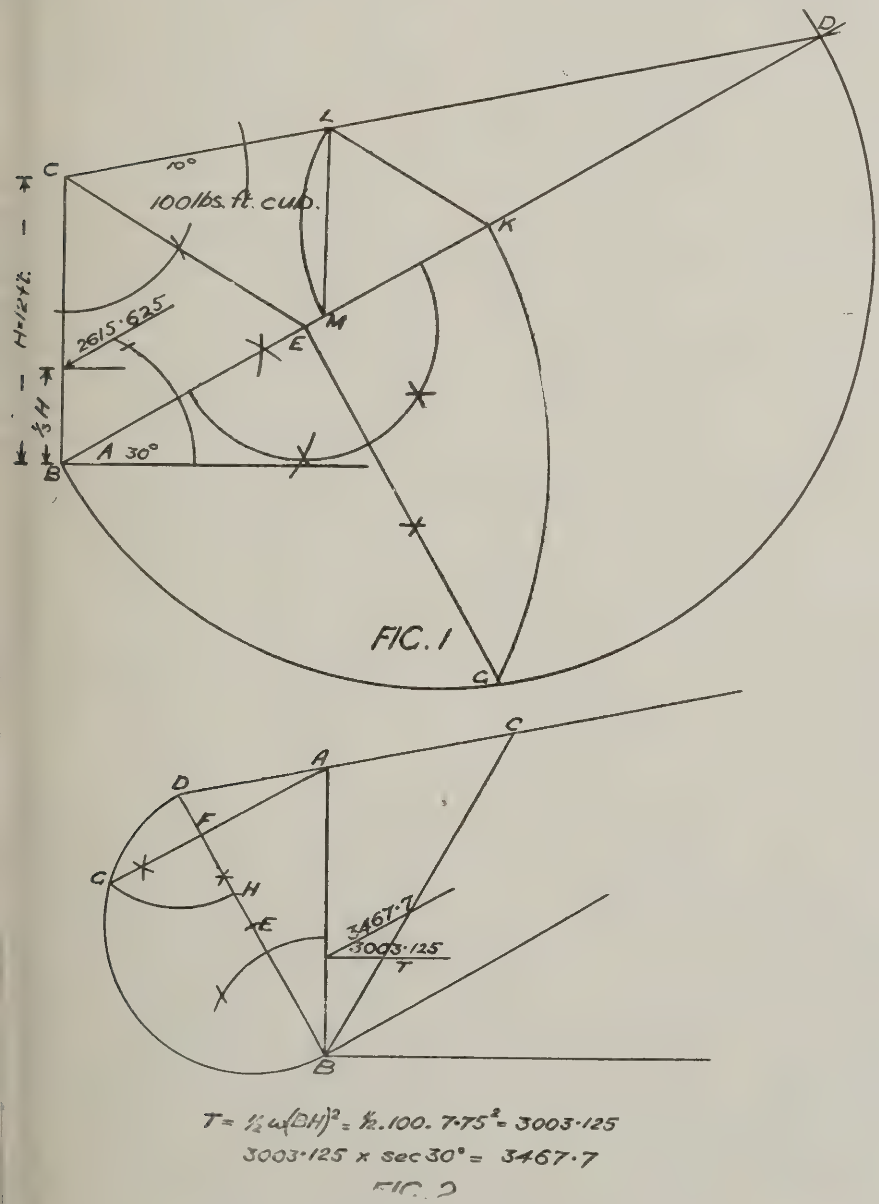
G.

hrust on Surcharged Retaining Wall.

H. K. writes: "Please give a proof of
e following graphical method of deter-
ining the magnitude of the earth
essure behind a wall (Professor Reb-
inn's method): In the accompanying
etch BC represents the back of the wall,
d CD the upper surface of the earth.
raw BD, making an angle A with the
rizontal, equal to the angle of repose of
e earth. On BD describe a semi-circle
GD. From C draw CE, making an
igle = 2A with the back of the wall. At
draw EG perpendicular to BD to cut the
mi-circle in G. With centre B and
dius BG, cut BD in K. Draw KL
rallel to CE, cutting the upper surface
L. Make KM = KL and join LM.
ie triangle KLM is called the earth
essure triangle. Suppose it to represent
triangular prism of earth 1 ft. thick,
shown at T. Then the resultant
essure P per foot-run behind the wall,
cluding the effect of friction between the
rth and wall, is given by the weight
this prism of earth, or P = area KLM
sq. ft. × 1 ft. × weight of earth per
bic foot.

—The writer does not know Professor
ebhann's method, but taking it as given
the querist and assuming a wall 12 ft.
gh supporting earth with a natural slope
30 degrees and surcharge of 10 degrees,
ighing 100 lb. per cubic foot, the inclined thrust would be 2,615.625 lb., as in Fig. 1. Taking the same conditions and using Rankine's method as described in Adams' "Mechanics of Building Construction" (Longmans, 6s. net) Fig. 442 and p. 145, the horizontal thrust will be 3,003.125 lb., as in Fig. 2, and the inclined thrust to compare with the previous method 3,467.7 lb. The latter method is generally adopted and is certainly a much simpler and safer one.

HENRY ADAMS.



THRUST ON SURCHARGED RETAINING WALL.

Outside Hoist Over Railway Siding.

SUBSCRIBER writes: "(1) Please give figured constructional detail of boarded outside hoist over a railway siding. It is 8 ft. deep and 6 ft. wide. (2) What is the most economical floor of joists and boards to carry four tons per foot super. with transverse girder spaced 13 ft. 6 in. centres? (3) Would 11 in. by 3 in. deal joists carry this weight over 11-ft. spans between girders with 11 in. by 3 in. solid hedging and $\frac{3}{4}$ tie-rods in centre of bays? (4) Would 18-in. walls with 3 ft. 4½-in. piers be sufficient for a building of this height; all floors to carry four tons per foot super?"

—(1) As this appears to be a railway warehouse it will be found that the Midland Railway Company have their standard details for outside hoistways or loocums. The principle is to have a vertical member against the wall from top to bottom on each side. From this at each floor a strut to carry framing, held up at its outer end by a tie to the vertical at next floor level above. These parts do all the work, and must be strong enough to carry the structure, which may be lightly built up on these parts.

(2) A floor load of four tons per foot super on a span of 13 ft. 6 in. would be impossible for fir joists and boards, as the safe pressure across the grain of fir is only 175 lb. per square inch of bearing surface. At 1 cwt. per foot super., fir joists, 12 in. centre to centre, would need to be $(13.5)^2 \times 4 = bd^2$, say 12 in. deep by 5 in. thick, and 7 in. between joists.

(3) Solid bridging does not stiffen a floor so much as herring-bone strutting, and a tie-rod through centre of bay has no effect with solid bridging, but would prevent thrust beyond the bay with herring-bone strutting. Fir joists 11 in. by 3 in. on a span of 13 ft. 6 in. will carry safely $\frac{3 \times 11}{13 \cdot 5} =$ say 27 cwt. distributed, and $\frac{27}{13 \cdot 5} = 2$ cwt. per foot run. Therefore to carry 4 cwt. per foot super., 11 in. by 3 in. joists would have to be placed 6 in. centre to centre, or 3 in. apart.

(4) In this question the querist again mentions 4 tons per foot super. for floor load, but as he wants an opinion upon the whole building under this load, he had better consult a local architect, who will look into the question of foundations and other necessary matters.

HENRY ADAMS.

Cheap Cottage Construction.

H. E. A. writes: "(*a*) What is the most effective method of making a steep cottage roof non-conducting? A large part of the slope will be in the room, and the situation is exposed. Economy is a prime consideration. It is preferred that the slating should be upon battens and be torched or pointed on the underside. The ceilings and slopes of the room will be plastered.

"(*b*) Can solid concrete floors be satisfactorily covered with cork, carpet, or linoleum or other material, with a non-conductor underneath, so as to give a floor suitable for a living room, as a new cement floor is likely to have a detrimental effect on the floor covering?

"(*c*) What is the best method of supplying hot water from the living-room range to bath (possibly on first floor) and scullery sink, etc. Cold water supply would have to be raised from a well by a hand pump.

"(*d*) It seems undesirable to use very cheap ironmongery in the cottage under consideration, but good door and window fittings cannot be afforded. Have suitable latches and catches been devised which could be made by a local joiner? If so, can you suggest details? Safety against burglary is of no importance, but the fittings must be capable of fixing doors and windows so that they do not rattle."

"(*e*) How, and of what class of timber, should wood eaves-troughs and down-spouts be constructed and treated so as to prevent decay as long as possible?"

—(*a*) If economy is really a *prime* consideration, the cheapest reasonably effective method is to lay stout Willesden underslating paper direct on the rafters before battening. This, of course, prevents the slates being torched or pointed after laying, but the paper, if properly lapped, will keep out any wet which may be blown or driven under the slating. If the cost can be afforded, a very effective method is lightly to pack the space between the rafters (*i.e.*, between slating and plastering) with slag wool. This can be done after the slates have been torched, the lathing being begun at the bottom and applied for about 2 ft. in height, then the space filled with slag wool and 2 ft. further fixed, and so on. The pugging will not prevent the plaster keying through.

(*b*) Linoleum has been largely used laid direct on cement-floated concrete in recent buildings. If the new cement floor has been allowed sufficient time to set and *dry* no deleterious results should follow, but linoleum should be cut to shape and laid out for some weeks before glueing down, as it swells considerably after exposure and is apt to rise in blisters if fixed before this has fully taken place. The best cheap means of lessening the conductivity of the solid floor is the insertion of a layer of large dry brick rubbish below the concrete.

(*c*) A recently introduced portable range in which the hot-water storage tank forms a sort of reredos in combination with the boiler seems to be the cheapest device obtainable consistent with efficiency. It has the additional merit of being free from complications and easy to fix.

(*d*) Good stout malleable iron door furniture and casement fittings can be obtained at about the following prices: Thumb latches, 1s.; cockspurs, 5d.; staybars, 9d. It is most unlikely that any substantial saving on these low prices will result by having special fittings made by local joiners. Such fittings have, however, been devised. If cost is such an important consideration and safety against burglary of no importance, why not adopt the Yorkshire casement, which requires no hinges, fastenings, or stays whatever, remains in position however it is left, and is less liable to rattle than almost any other form of window?

(*e*) Cypress is the timber used in America for guttering and downspouts—a coat of one of the advertised wood-preservatives would probably afford help in resisting decay. Gutters are made V section and downspouts square, both being grooved and tongued at angles. G.

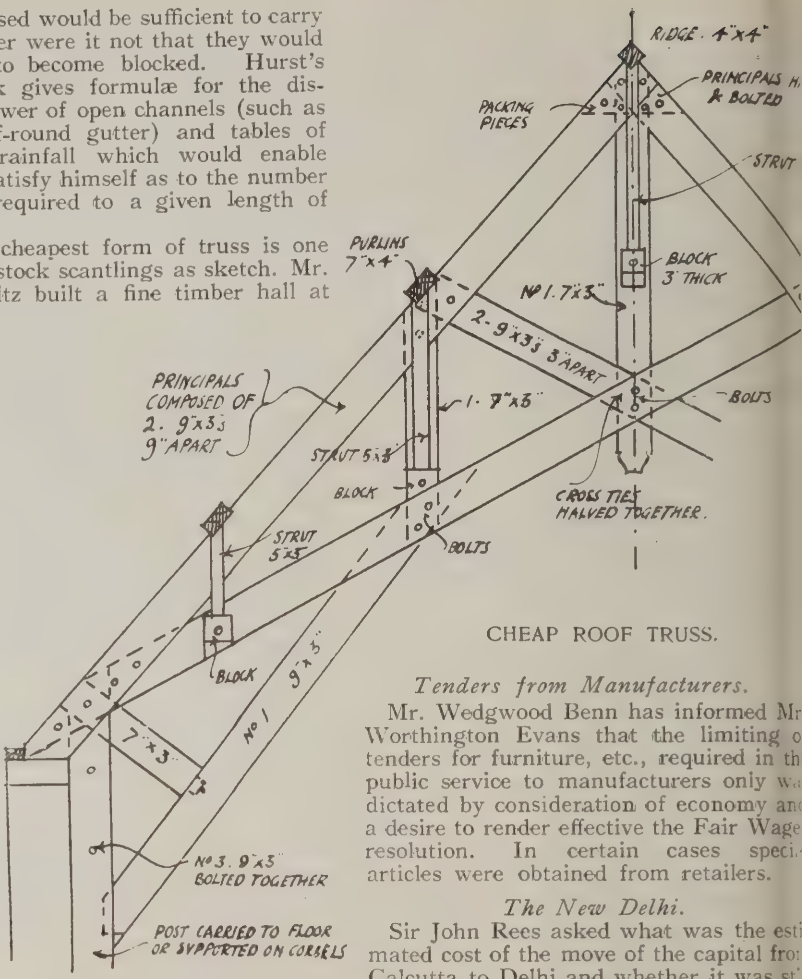
Fixing Oak Verandah Posts: Downpipes: Cheap Roof Truss.

A. R. writes: "Please state (1) the most satisfactory method of fixing oak verandah posts in concrete paving (with a view to avoiding danger of the ends rotting). (2) Data which one can use in deciding the number of downpipes necessary on a given roof play, say, for an ordinary 4 in. half-round gutter. (3) The cheapest form of wood roof truss (avoiding a tie-beam) for a slate roof, pitch 50 degrees, over a small hall 20 ft., span-trusses at 10 ft. centres."

—(1) If it is necessary for the posts to fix *in* the paving a cast-iron shoe extending about 2 in. above finished paving level, to which the foot of the post is fitted (the outside size of the shoe being the same as the post so that the foot is reduced by the thickness of metal) is probably as good a way as any. If the post may *rest* on the paving, a slate dowel standing above the paving, over which the post fits, is sufficient.

(2) Calculations are rarely made in such cases, the size of ordinary downpipes being proportioned in view of their liability to obstruction rather than their capacity for delivery—much smaller pipes than those commonly used would be sufficient to carry off roof water were it not that they would be certain to become blocked. Hurst's pocket book gives formulæ for the discharging power of open channels (such as a 4-in. half-round gutter) and tables of maximum rainfall which would enable querist to satisfy himself as to the number of outlets required to a given length of gutter.

(3) The cheapest form of truss is one built up of stock scantlings as sketch. Mr. Weir Schultz built a fine timber hall at Settlement Buildings, Cardiff, with trusses of this form, and a similar type was used by Mr. Curtis Green at a hall at Croydon. G.



CHEAP ROOF TRUSS.

IN PARLIAMENT.

(*By Our Press Gallery Representative.*)

Statuary in the Parks.

In the House of Commons last week Mr. Yerburgh asked whether the Commissioners of His Majesty's Office of Works would provide a site for a statue or a group of statuary proposed to be erected by the committee for erecting a national memorial to Sir Francis Drake on the stone flags between the pumping station and the head (east end) of the Serpentine.

Mr. Wedgwood Benn said that from an answer which he gave on April 16, 1912, it would be seen that the First Commissioner was pledged to oppose any scheme for the erection of statuary in the Royal Parks. He would not be able, therefore, to agree to this suggestion unless it was the unanimous wish of the House.

Mr. Yerburgh asked whether that pledge was not given in respect of the grass in the park, and in view of the fact that this site was nothing but stone flags would that alter the situation?

Mr. Wedgwood Benn replied in the negative. The pledge, he said, applied to all sites in the park.

Captain Murray asked whether there had not been considerable objection to this site.

Mr. Wedgwood Benn said that Earl Beauchamp, the First Commissioner, gave a pledge and could not depart from it without the consent of those to whom he gave it.

Tenders from Manufacturers.

Mr. Wedgwood Benn has informed Mr
Worthington Evans that the limiting o
tenders for furniture, etc., required in th
public service to manufacturers only wa
dictated by consideration of economy an
a desire to render effective the Fair Wage
resolution. In certain cases speci
articles were obtained from retailers.

The New Delhi.

Sir John Rees asked what was the esti
mated cost of the move of the capital fro
Calcutta to Delhi and whether it was st
maintained that the cost would not larg
exceed £4,000,000.

Mr. Charles Roberts, who replied, sa
there probably would be some excess ov
the original estimate of £4,000,000, bu
how much it could not at present be sa
The engineers' and architects' proposa
were being subjected to a close scrutin
and revision by the Government of Ind
with a view to effecting all possib
economies consistent with the requir
ments of a new Imperial city.

London Building Trades Dispute.

Mr. Tyson Wilson asked the Preside
of the Board of Trade if his attention ha
been called to a statement made at th
annual meeting of the National Federati
of Building Trades Employers of Gre
Britain and Ireland, by the president
the federation, in which he said: "Th
secretary will presently issue informati
to all the branches that there is this di
pute in London so that the branches w
know when men come from London to th
provinces; their insurance cards will tra
them out; and in fulfilment of these r
solutions you will not give employment
these men"; and whether he proposed
take steps to prevent an Act of Parli
ment being used for the purpose
systematically victimising workmen wh
refused to sign an agreement of whic
they did not receive notice in accordan
with the rules signed by them and the
employers.

Mr. Burns said his attention had n
been called to the statement referred to
the first part of the question. As regar
the suggestion contained in the secon
part of the question it was not cle
whether the reference was to health i
surance contribution cards or to unemplo
ment books. If he received further detai
as to the precise nature of the difficulti
experienced and any practical suggestio

r meeting those difficulties he would be lad to consider them so far as they ffected Part II. of the National Insurance ct, with which alone the Board of Trade ere concerned.

Shadwell Memorial Park.

Mr. Hoare having asked a question with gard to the present position of the Shad-ell memorial park scheme,

Mr. Wedgwood Benn said the difficulties ith regard to the transfer of the site had ow been overcome, the approved draft nveyance having been delivered to the ing Edward Memorial Committee last eek, and its completion could only be ow a matter of a few days. The Memorial ommittee found themselves confronted ith unexpected difficulties in providing e funds for the construction of the em-ankment wall and the laying out of the ark, inasmuch as a promised donation of 25,000 had recently, to the regret of the tending donor, had to be cancelled.

Mr. Harry Lawson asked whether the irst Commissioner had considered the ropriety of seeking a grant in aid or other eans of assistance.

Mr. Wedgwood Benn said he would be appy to consider the suggestion.

Mr. W. Pearce asked whether the Man-on House Committee hoped to obtain milar benefactions or were they consider-g the idea of a general appeal to the ublic?

Mr. Wedgwood Benn was unable to say hether they had decided to make a eneral appeal, but he had no doubt that ey would be very glad to have money to arry on the Shadwell scheme.

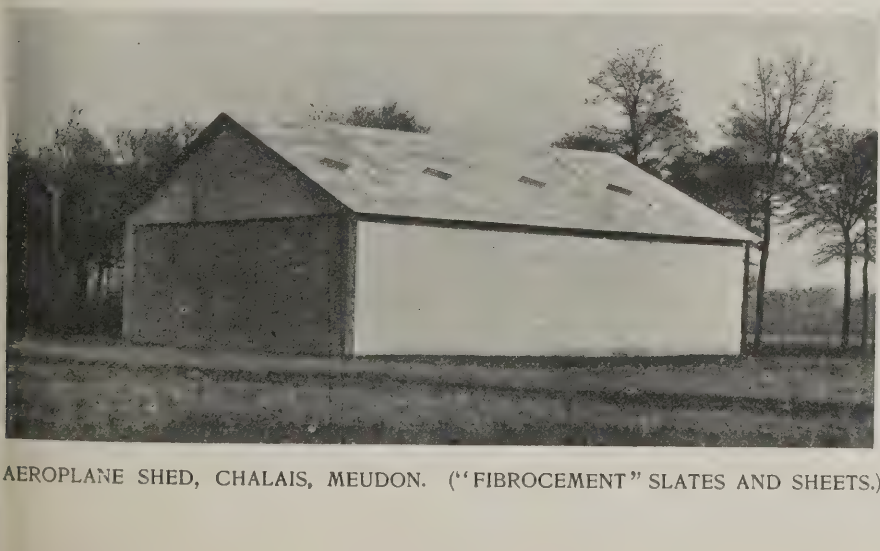
TRADE AND CRAFT.

"Fibrocement" Slates and Sheets.

Booklets issued from the London office 2, Laurence Pountney Lane, E.C.) of e British Fibrocement Works, Erith, ent, give a very full description of the aterial and its uses. Fibrocement is escribed as a kind of concrete or moured cement, in which high-ade, slow-setting Portland cement is armoured" by means of asbestos fibre, e whole composition being subjected in e course of manufacture to enormous essure, which renders the slate of such mpactness, that, even when fresh, it ab-rbs hardly one-fourth in weight of the uantity of moisture which a tile of good ality and the same volume would sorb. Exposed to atmospheric influ-ces, Fibrocement slate, it is claimed, rdens rapidly and becomes absolutely npervious, chemical reaction taking place roughout its substance. Further, the resistance of the material to mechanical stresses and strains—compression, bending, blows, etc.—is stated to be enormous, and at the same time there is a high degree of elasticity, a point upon which the vendors lay particular emphasis. Lightness of weight is another important advantage; this kind of roofing weighs only about 16 lb. per square yard, and thus it can be substituted for thatch, shingle, or roofing felt without any need for strengthening the timber work. Its non-conductivity renders the material additionally economical for the roofing of workshops, factories, and warehouses, the cost of whitewashing in summer becoming unnecessary, while these slates are free from the need for frequent repairs which attends the use of materials that are liable to break or crack under strain by percussion, or from the effects of frost, it being stated that Fibrocement is absolutely insensible to cold, as well as being accepted by the insurance companies as a fireproof material. It is very tractable, and can be sawn, glued, nailed, or punched. Although, for laying, the diagonal style is recommended, these slates are made of various patterns and of different sizes, admitting of a considerable range of choice in the treatment. In one of the booklets under notice the systems illustrated are—the diagonal, with lapping edges, the rhomb, the honeycomb, and the "straight," while scalloped slates in various colours are available for artistic effect. A patent zinc or copper book for fastening slates to iron roofs is supplied by the firm; who, we are informed, have roofed the first radium factory erected in the kingdom. A thousand of these slates weigh, it is said, only 25 cwt., and will cover twelve squares. Sheets of this material are used for ceilings, walls, and partitions. Walls thus formed—simply by nailing the sheets to the uprights—can be immediately painted or papered, and, of course, are free from the danger to health that may arise from the dampness of newly plastered walls, while the sheets are so rigid as to increase the strength of the structure, and are in the highest degree incombustible. These materials are of obvious utility for the construction of buildings in tropical countries; and their applicability to light buildings is shown in the accompanying illustration of an aeroplane shed at Chalais, Meudon.

Patent "Ferro-stone" Glazing.

In a booklet issued by the Universal Concrete and Construction Co., Ltd., 20, Victoria Street, Westminster, the claims for the "Ferro-stone" system of glazing are set forth substantially as follows: The material is of light stone colour, and therefore acts as a light reflector. It is not affected by moisture and impurities in the atmosphere, and is therefore eminently suitable for railway stations, factories, and all places subjected to chemical fumes. It requires no painting or other covering, and therefore the cost of maintenance is reduced to a minimum. Further advantages claimed are—exceedingly light weight, absence of deflection, absolute fireproofness and watertightness, and supreme ease of fixing. Brass clips and asbestos seating form a perfect cushion for "Ferro-stone" glazing, so that resilience is ensured and risk of fracture due to concussions and vibration is negligible. The booklet is illustrated with views of the following buildings in which the system has been employed: Messrs. Olivier's Factory, Mill Hill (15,000 ft. super.); Relyante Motor Works, Walthamstow; and a factory at Fawley Road, Tottenham, while half a dozen pages of diagrams show the constructional details.



AEROPLANE SHED, CHALAIS, MEUDON. ("FIBROCEMENT" SLATES AND SHEETS.)

Successful Trading.

The report of the directors of Messrs. Harris and Sheldon, Ltd., manufacturing shopfitters, of Birmingham, recommends a dividend on ordinary shares of $7\frac{1}{2}$ per cent. for the year ending December 31, 1913, the placing of £4,000 to reserve, and the carrying forward of £3,251 odd to reserve.

EXHIBITION OF TAPESTRIES, ETC., VICTORIA AND ALBERT MUSEUM.

Students of architecture will find much to interest them in this exhibition of tapestries, carpets, and furniture (lent by the Earl of Dalkeith), which form a representative collection of English seventeenth-century art. The tapestries were manufactured at the famous Mortlake factory established in the reign of James I. Forty years later they were eclipsed by the work of the Gobelins factory. It was unfortunate that the industry could not have survived, especially as these tapestries are excellent of their kind. The most prominent exhibits shown are the cartoons after designs by Raphael. These seem somewhat marred by the borders of festoons and fruits rather reminiscent of Grinling Gibbons, which form a restless frame. These cartoons, as most of our readers will know, depict the Acts of the Apostles—the death of Ananias, Elymas the Sorcerer struck with blindness, St. Paul preaching at Athens, etc. But perhaps it is to the set of "Naked Boys" that the visitor to this exhibition will turn with most pleasure. The fine decorative quality and whimsical fancy of these pictures cannot fail to charm. These precocious babies seem to have given themselves up to all manner of sports; they blow bubbles, play leapfrog, climb trellises to gather grapes, and carry flags in little mock processions; and they do all these things in a delightful environment of an English park full of trees having that peculiar dull dense foliage which suggests so admirably both shelter and hiding-place. The cartoons after "The Triumph of Julius Cæsar," by Mantegna, are not so successful.

This exhibition suggests the reflection that tapestries ought still to play a part in the embellishment of architecture. Of course, tapestries are conducive to a sense of stuffiness when placed in a small room, and for that reason they have been superseded by wall-paper, but even in modern times there are occasions when huge bare walls of a somewhat rough texture might make a magnificent background for rich tapestries.

A number of Oriental carpets are also exhibited, for the most part woollen pile carpets, and there are some very fine rugs woven in silk, gold, and silver, which, according to the description, "belong to a class once designated as Polish, though it is now clearly established that these richest of all carpets were woven in Persia, having been most probably intended as gifts from the Shah to foreign states."

The seventeenth century and early eighteenth century furniture which is shown here includes specimens of a great variety of design. The English "flame" pattern occurs in several instances in the coverings of chairs. It seems a pity that this pattern should have become extinct, for, although too self-assertive for most places, it would add a piquancy to many a dingy London back bedroom. There are some beautiful examples of carved walnut. The exhibition is open until May.

THE LIVERPOOL TOWN PLANNING AND HOUSING EXHIBITION.

This exhibition, which is appropriately being held in Liberty Buildings, the home of the School of Civic Design and Town Planning, Liverpool University, was opened by the Marquess of Salisbury on Saturday last. Its object is to afford opportunities to all those interested in town planning and housing to pursue their investigations, and to review and compare results recently achieved. The exhibition has been divided into the following main sections: (1) The Progress of the Town Planning Act; (2) The Historical Development of Towns; (3) Housing and Co-partnership Systems; (4) Liverpool—Past and Present.

A large collection of maps and diagrams of Town Planning schemes in operation are shown, including a complete collection of local contributions. Comparative examples of town-planning, both in past and present times are illustrated as they are found in their characteristic types, and the various social and other influences that have affected their growth will be explained graphically. The Garden Cities Association and Co-partnership Tenants, Ltd., have co-operated in Section 3, which is particularly complete.

Liverpool—Past and Present.

Liverpool, by means of the immense improvements which she has made in the matter of housing the poor and the making of wide roads, may in these directions be regarded as a pioneer in town planning. The Liverpool exhibit comprises a representative collection of maps, plans, drawings, and models illustrating the growth of the town, its expansion during the industrial period of last century, and the improvements which have recently been undertaken by the Corporation and private enterprise. Its areas of pauperism, of industry and of recreation; its varying rateable values, the relative ages of its streets and districts; and the distribution of its schools and public buildings are graphically illustrated. Possible schemes for future improvements are shown.

The Conference.

In connection with the Exhibition there is to be a Conference which will be held in one of the large rooms of Liberty Buildings during the afternoons and evenings of the first week of the Exhibition. The Conference will be conducted as a series of discussions on definite questions germane to the subject of Town Planning and Housing. No formal papers will be read, but after the opening remarks of the chairman the procedure will take the form of an open debate in which everyone is invited to take part. A detailed syllabus of the subjects to be discussed will be forwarded on application to the Secretaries to those wishing to attend.

Appended is a list of the chairmen who have consented to preside at the different sessions:—

Monday, March 9.—"Roads."—Afternoon: J. A. Brodie, M.Inst.C.E., City Engineer, Liverpool. Evening: H. E. Stilegoe, M.Inst.C.E., City Engineer, Birmingham.

Tuesday, March 10.—"Town Planning Under the Act."—Afternoon: T. de Courcy Meade, M.Inst.C.E., City Surveyor, Manchester; Evening: H. Chaloner Dowdall, B.C.L.

Wednesday, March 11.—"Town Planning Under the Act."—Afternoon: Raymond Unwin, F.R.I.B.A. Evening: Edmund R. Abbott, Clerk to the Ruislip-Northwood U.D.C.

Thursday, March 12. — "Housing" (Urban and Rural).—Afternoon: Austin Harford, Vice-Chairman, Liverpool Corporation Housing Committee. Evening: Percy T. Runton, A.R.I.B.A, Architect of Hull Garden Suburb.

Friday, March 13. — "Housing" (Garden Suburbs and Co-partnership Tenants).—Afternoon: Ewart G. Culpin, Secretary of the Garden Cities and Town Planning Association. Evening: Henry Vivian, Chairman of Co-partnership Tenants, Ltd.

Admission to the Conference is by ticket, which may be obtained free on application. The Hon. Secretary for the Conference is Mr. Sydney Kelly.

Arrangements.

All enquiries respecting the programme of the Exhibition, which will be continual during March, should be addressed to the Hon. Secretaries, Professor S. D. Adshead and Patrick Abercrombie, Liberty Buildings, School Lane, Liverpool.

SPECIAL LEGAL REPORTS.

Builders' Claim for Erection of a Picture Palace.

Budd and Pettman v. Bywater.
Hirst v. Bywater.

February 28. King's Bench Division. Before Mr. Justice Coleridge.

This was an action by Messrs. Richard Budd and E. Pettman, builders, of King's Road, Herne Bay, claiming from the defendant, Mr. N. J. Bywater, the landlord of premises at Wanstead, the balance of an account in connection with the building of a picture palace theatre at the back of premises known as the George Hotel, Wanstead, viz., £275, alleged to be due to them in connection with the erection of the picture palace. Mr. R. Hirst, of Walthamstow, was plaintiff in a second action against the same defendant, claiming £100 which he said the defendant agreed to give him if he kept the cost of the theatre to £750. He also sought to recover £90 which he said was due for materials supplied and work done. Defendant denied liability. After legal arguments, in the first action, judgment was entered for Budd and Pettman for £150 7s. 1d., with costs, and judgment for the defendant on a counter-claim for £1 10s., In the second action judgment was entered for £182 8s. 2d (including money paid into court) with costs. Stay of execution was granted.

Conviction Under the London Building Act Quashed.

Holliday and Greenwood, Ltd., v. District Surveyors' Association (Incorporated), and another.

March 4. King's Bench Division. Before Mr. Justices Channell, Scrutton, and Bailhache.

This matter came before the Court on a case stated by the magistrates, being a conviction under the London Building Act, 1894, Section 145.

Messrs. Holliday and Greenwood, Ltd., builders and contractors, were under contract to erect certain new schools and carry out certain work for the London County Council, in Walworth, and they were prosecuted at the instance of the District Surveyors' Association, for having failed to give proper notice to Mr. Dixey, a district surveyor, in accordance with the London Building Act. The magistrate, at the Lambeth Police Court, refused to accept the defence that the Education Act, 1911, exempted the builders from giving notice, and convicted, stating a case for the opinion of the High Court.

Mr. Danckwerts, K.C., and Mr. C. Carr appeared for Messrs. Holliday and Greenwood, and Mr. Ryde, K.C., and Mr. Daldy for the other side.

Mr. Danckwerts said the question here was whether or no the London County Council as Educational Authority for the County of London were obliged to give a notice under Section 145 of the London Building Act, before they commenced erection of a new school. That question depended not only upon the interpretation of Section 145, but partly upon that of Section 3 of the Education Act, 1911. Counsel contended that this latter section exempted the London County Council or their contractors from giving any notice, provided the schools were erected in accordance with the regulations of the Board of Education. His submission was that they must read into the 1911 Act also the Act which preceded it.

Mr. Justice Channell raised the question as to whether the Act of 1911 took away from the District Surveyor the right to inspect the building whilst it was in course of erection. If it did so it seemed hardly necessary to give any notice.

Mr. Danckwerts replied that the London Building Act made the right of inspection irrespective of the notice.

Mr. Ryde contended that notice ought to have been given because the Act of 191 preserved a certain amount of control by district surveyors with reference to a variety of matters which were not deal with by any regulations of the Board o Education.

Mr. Justice Channell, in giving judgment, said the point was one of substantia difficulty, when one came to apply the words of Section 3 of the Act of 1911 to the provisions of Section 145 of the London Building Act. If those words were quit clear, of course the policy of the Act would be an irrelevant consideration, but if they were not, then the Court had to try and find what was the true meaning. In hi opinion, Section 145 was a provision dealing with the construction of new buildings and the notice required by that provision was dispensed with by the Act of 1911, in the same way as notices under the Public Health Acts were dispensed with in other parts of the country. He was guided in coming to that decision by the fact that he could find no reason for holding that there as a difference in the law in places such ; London, governed by local building acts, ıd those governed by the Public Health cts.

Justices Scrutton and Bailhache con- ırred, and the appeal was allowed, and e conviction quashed.

ayor, etc., of Stratford-upon-Avon v. Parker.

ilapidations: Liability: Important Judgment.

ırch 5. King's Bench Division. Before Justices ush and Atkin.

This was an appeal by the plaintiffs from judgment of Judge Ingham, sitting at the ratford-upon-Avon County Court.

The plaintiffs sued the defendant, of ursery Road, Handsworth, to recover the m of £100 in respect of a breach of cov- ant to repair 46 and 47, Henley Street, ratford-upon-Avon. The county court dge found in favour of the defendant, d plaintiffs now appealed.

Mr. J. B. Matthews, K.C., and Mr. arson argued the case for the appellants, d Mr. Disturnal, K.C., and Mr. Wylie r the respondent.

The facts of the case are fully set out the judgment of the Court.

Mr. Justice Lush said this was an appeal the plaintiffs from a judgment of the unty court judge at Stratford-upon- on, and it raised a point of some novelty d some little difficulty. Plaintiffs were the sors of some premises of which the ther of the defendant was the lessee. e died some few years ago, and this ion was brought against her son, the fendant, as executor *de son tort* d assignee of his mother, upon a cov- ant to repair, contained in the lease. The ts were shortly these. No letters of ninistration were ever granted in respect the estate of the defendant's mother, and left no will. On the mother's death rents from the tenants were collected the defendant, and he paid them to his ter. The sister died in August, 1912. fendant did not know to whom this perty belonged after his sister's death, he continued to collect the rents and d the ground rents to the plaintiffs, and at was over he retained in his own ıds on behalf of such persons as might, law, be found entitled to the rents. De- dant said he had never been in session of the demised premises, and he ied liability. The houses got into a l state of repair, and the plaintiffs took session, and took the rents to the end the term. The question was whether action for breach of covenant to repair tained in the lease lay against the de- dant, as executor *de son tort* and ignee of the tenant for life. The county rt judge found that the action would lie, and gave judgment for the defend- . Defendant could not be sued on the enant unless he entered into the cov- nt or became liable on the covenant by vity of estate. As he did not enter into covenant he could not be sued. Could be sued under the other head? De- lant never did pay the ground rent in own name or did anything to show that was the plaintiffs' tenant, either by im- ation or anything else. Plaintiffs, as ı as they found that the rent did not ıe from the mother, took possession of property at once, and elected not to t the defendant as their tenant. In his dship's opinion defendant was not le under circumstances like these by ity of estate. Defendant was never sessed of his term of years, and he never any privity of estate, which would en upon him the same liabilities in respect of the covenant that he would have been under. There was no privity of estate, and no privity of contract here, and the county court judge arrived at a right conclusion, and the appeal would be dismissed with costs.

Mr. Justice Atkin concurred.

Leave to appeal was granted.

THE MANCHESTER BUILDING TRADES EXHIBITION.

The eighth Manchester Building Trades Exhibition, which was opened at the City Exhibition Hall, Deansgate, on March 3, and will close next Saturday, is quite on a level with its predecessors as regards the standard achieved and the variety of its exhibits. A novel feature this year is the competition for art students, who are invited to send in drawings illustrating their ideas of the best method of utilising the already much discussed infirmary site. There is also a very interesting loan collection of British Photographs of Cathedrals.

Among the principal exhibitors, Messrs. D. Anderson and Sons, Ltd., of Belfast and London (Stands 36 and 37), are showing examples of their "Rok" roofing, which is known all over the world for its durability and imperviousness to climatic and chemical influences. The "Rokalba" Roofing, which is "Rok" covered with asbestos, is also on view. "Stoniflex" roofing, "Sideroleum" the wood preservative, "Sanador" a special asphalted felt, and "Zerolite" Insulating Papers are among this firm's other specialities.

Bell's United Asbestos Northern Agency (Stand 27) exhibit "Poilite" roofing tiles, the feature of which is that they may be fixed at 13½ in. centres and to steel laths, and are fire and frost proof. "Poilite" asbestos sheets, veneered sheets for railway and tramcar construction, and compressed sheets for electric installation, are also shown.

The British Fibrocement Works, Erith, Kent (Stands 54 and 55), exhibit a simple type of building roofed with their patent "Fibrocement" asbestos slates, and lined with "Fibrocement" sheets, skirtings, and mouldings.

The British Portland Cement Manufacturers, Ltd. (Stands 31, 32, and 33), exhibit various articles, such as reinforced concrete fence-posts and fencing, concrete drain-pipes, columns, etc., intended to show the steady advance of concrete and reinforced concrete in the manufacture of appliances and structures on the farm and estate.

The Contract and Works Supply Company, of Manchester (Stand 65), who are the agents for "Ceresit" waterproofing material, show a reinforced concrete tank, 6 ft. long, with plate-glass front. There is a tall tub containing 20 gallons of water pressing on a ¾-in. Ceresit cement mortar slab; also a small model of a Japanese pagoda constructed of concrete and Ceresit mortar, standing in water, with horizontal damp-courses, which prevent water rising, in slabs of Breye concrete without Ceresit. The roof is in the form of a shallow tank, also filled with water. The firm's list includes several other special lines.

Messrs. Felber, Jucker and Co., Ltd., of Manchester (Stands 40 and 41), have an exhibit showing the application of "Asbestilite" asbestos-cement tiles and building sheets to modern building construction.

The International Correspondence Schools, Ltd. (Stand 67), are represented by a collection of their educational exhibits.

The Ironite Company, Ltd. (Stand 49), exhibit their well-known preparation for rendering new and old structures damp-proof, also their patent Ironite flooring.

The Patent Rapid Scaffold Tie Company, Ltd. (Stand 51), have a scaffolding exhibit showing their sherardized appliances in use or under test. The process is one of dry galvanising, by which iron and steel articles are rendered rust-proof to an extent not obtainable by any other process.

G. R. Speaker and Co. (Stands 52 and 53) exhibit a wood and steel-framed building, showing the use of Speaker's "Eternit" slates for roofing, and of "Eternit" sheets for lining. The special method by which the sheets can be fixed to any form of steelwork is demonstrated.

Vulcanite, Ltd. (Stands 28 and 29), The special feature of this exhibit is a model swimming bath, water-proofed with patent Vulcanite lining. A model of a flat roof covered with Vulcanite roofing is also shown; this is divided into two sections, one of which illustrates the patent roofing finished with a covering of tar macadam, and the other the Vulcanite finished with sand and gravel. Among numerous other specialities of this firm are: "Bituna" Pure Bitumen Damp-course, Vulcanite Asphalte and Rexilite Damp-courses for Foundations, etc., Leatherite, Vulcanite Asphalte and Rexilite Roofings for Sloping and Circular Roofs, Vulcanite Carpet Felt, etc., and "Mailon," a non-inflammable preservative for iron and woodwork.

COMPETITIONS.

School, Hendon.

Hendon Education Committee have agreed to the throwing open of the competition for a new school to be erected in Hale Grove Gardens, and to the payment of a commission of 5 per cent.

Workmen's Cottages, Hawarden.

Hawarden Rural District Council invite the submission by architects of plans and estimates for laying out a piece of land (the S.W. portion of a field Number 39 on the Ordnance map (1911 Edition) in the parish of Hawarden), containing about 2¾ acres, and for the erection thereon of workmen's cottages. The plans must comply with the by-laws of the council, and must provide for such works as sewering and road making, and for houses such as let at about 4s. per week. Further particulars may be had on application to Mr. F. Barrett, Sanitary Inspector's Office, Hawarden. Plans and estimates should be sent by March 16 to Hugh G. Roberts, Clerk, Council Offices, Broughton, near Chester.

Sculpture, Kelvingrove Park, Glasgow.

A competition has been opened by Glasgow Corporation, for the provision of four groups of symbolical sculpture on the abutment piers of the new Radnor Street bridge over the River Kelvin, Kelvingrove Park. Preliminary models of the groups, to a scale of 1 in. to 1 ft., are to be submitted. The sum of £500 for each group will be paid to the author or authors of the selected designs, this sum to include the making of a full-size model and the final cutting of the group on the bridge in white freestone. Alternative designs in bronze are also invited. The Corporation will be assisted in their selection of designs by Sir George Frampton, R.A. Preliminary models, with relative offers, must be sent, carriage paid, and accompanied by a sealed envelope containing the author's name, to the Town Clerk, City Chambers, Glasgow, from whom further particulars may be obtained.

Wesleyan Methodist Chapel, Carcroft.

Members of the Society of Architects are requested not to take part in the competition for the above building without first ascertaining from the secretary whether the conditions are such as can be approved by the society.

Designs for Concrete Cottages.

The proprietors of "Concrete and Constructional Engineering" are inviting designs for a detached or semi-detached labourer's cottage (largely or mainly of concrete), to be erected in sets of six in the Home Counties of England (at least thirty miles from Charing Cross) at a prime cost to the owners of £125 per cottage. The following premiums are offered: First, 100 guineas; second, 50 guineas; third, 25 guineas; fourth and fifth, 10 guineas each. The assessors are: Mr. Max Clarke, F.R.I.B.A., Professor Beresford Pite, F.R.I.B.A., and Mr. Edwin O. Sachs. Designs have to be delivered at the offices of the above journal, North British and Mercantile Building, Waterloo Place, Pall Mall, London, by May 15th, 1914.

BUILDING AND THE CINEMATOGRAPH.

A notable departure in technical instruction was made at the premises of the Architectural Association, Tufton Street, Westminster, on Friday evening last, when a number of cinematograph films of building interest were exhibited. These were as follows:—

1.—Brick Making. This film showed the process of making hand-made bricks at the Daneshill Brick Works, Basingstoke. Lecturer, Mr. C. E. Varndell, F.S.I., A.R.I.B.A.

2.—Portland Stone. Part of two films showing the stone taken from the Bath Stone Firm's quarries at Portland to its position on the Australian Commonwealth building in the Strand. Lecturer, Mr. C. Mitchell.

3.—Ferro-Concrete. Part of a film illustrating ferro-concrete work, showing the manufacture of piles for foundations, by the Considère Construction Co. Lecturer, Mr. A. Gilbert Scott.

4.—Joinery. Part of a film illustrating some phases of joiners' work with modern machinery at Messrs. Elliott's Works, Reading. Lecturer, Mr. Philip E. Webb, A.R.I.B.A.

5.—Plaster Work. Part of a film showing some decorative fibrous plaster work made for the new Cunard liner Aquitania at Messrs. Jackson and Sons' works. Lecturer, Mr. Frank Jackson.

6.—Fireproof Floor Construction. Laying a "Kleine" floor. Lecturer, Mr. A. Gilbert Scott. The films and their accompanying lectures were prepared under the immediate supervision of the Architectural Association Council, with a view to their use in the preliminary courses of training in architectural and technical schools as a means of interesting the student in the various branches of his work. The films, which were manufactured by Messrs. Ruffell's Exclusives, Ltd., were altogether admirable, being very clear and steady; and the lectures considerably enhanced their educational value.

Further subjects for films are under consideration.

PROJECTED NEW WORKS.

Bank Premises, Middlesbrough.

Plans have been approved for the erection in Albert Road of new bank premises for the North-Eastern Banking Company.

Tower Restoration, Tewkesbury.

It has been decided to restore the interior of the Abbey tower at Tewkesbury as a memorial to the late vicar, Canon Wardell-Yerburgh.

Sanatorium, Lenham, Kent.

A site has been purchased at Down Court, Manor Farm, Lenham, upon which it is proposed to build the Kent County Asylum. Mr. Edwin T. Hall, F.R.I.B.A., is the architect.

Fire Station, Mold.

The Mold Urban Council have decided to build, on a site adjoining the new Town Hall in Earl Road, a new fire brigade station, at a total cost for land and buildings not exceeding £1,000.

Big Hotel for Berlin.

M. Auguste Rey, a French architect, has been commissioned to erect a great hotel in Berlin, near the Friedrichstrasse Station, on ground belonging to the Ministry of War.

Dwelling Scheme, Finchley.

The application by the Finchley Urban Council for permission to borrow £99,493 for the erection of workmen's dwellings has been the subject of an inquiry by the L.G.B.

Picture Palace, Trowbridge.

Plans have been approved of a picture palace proposed to be built by Mr. Albany Ward on the Woolpack Hotel site, Trowbridge. The building will seat 800 people.

Town Planning, Nottingham.

Nottingham Corporation have decided to apply to the L.G.B. for authority to prepare an important scheme of town-planning, the proposal being to deal with a large area of undeveloped land near the Daybrook Valley.

High School, Motherwell.

Plans have been passed at Motherwell Dean of Guild Court for a new High School for Dalziel School Board. The building, which is to be erected in Crawford Street, from plans by Mr. S. B. Russell, architect, London, is estimated to cost £27,000.

Workmen's Dwellings, Hinckley.

Sixteen workmen's houses are to be erected on surplus land belonging to the Council in Rugby Road and Coventry Road. The estimated cost of each house is £170. Application is to be made to the L.G.B. for sanction to a loan of £2,720.

Works, Bournemouth.

Bournemouth Corporation have decided to make application to the L.G.B. for sanction to the borrowing of a sum of £2,350 for the purchase of the property known as "Villa Real," Palmerston Road, Boscombe. The sum will be apportioned as follows: Municipal dispensary, £1,600; public conveniences, £700; and for law costs and contingencies, £50.

Municipal Buildings, Southport.

Southport Town Council have adopte a partial scheme for the extension of th town-hall and the erection of a three-store building on the site of the existing Rate Office. It has been decided to apply fc a loan of £7,500 to carry out the work.

Buildings, Selby.

The following plans have been ap proved: Buildings for two small holding in Flaxley Road for the West Ridin County Council; lock-up shop in Brook Street for Mr. A. Smith; and motor-she in Park Place for Dr. Gillies.

Church, Clydebank.

Clydebank Dean of Guild Court ha passed plans for the erection of a ne church by the congregation of the We U.F. Church, Dalmuir. The new buil ing will seat between 600 and 700 peopl The cost is estimated at £4,000. Messr Stewart and Paterson, Glasgow, are tl architects.

House Building, Oldham.

At the fortnightly meeting of the Ol ham Surveyors and Buildings Con mittee, thirty plans were submitted dea ing with 51 houses, 22 sundries and streets. Plans for 14 houses in Abbeyhi Road and Manor Road, 16 houses in Bu lington Avenue, 6 houses in Lacros Avenue were passed. Those relating to houses in Hibbert Street, 4 in Sunfie Road, and 1 in Chamber Road were a journed.

London.

The L.C.C. have consented to the exec tion of the following works:

Bow and Bromley.—Additional cubic extent at the Clarnico Confectione Works, Victoria Park, Bow, so far as r lates to the erection of an addition next White Post Lane, on the application Clarke, Nicholls and Coombs, Limited.

City.—Additional storey at No. 4, Fe church Street, on the application Messrs. Banister Fletcher and Sons, behalf of the City of London Real Pr perty Company.

Dulwich.—One-storey shop next North Dulwich Railway station, Red Po Hill, Dulwich, on the application Messrs. Martin and Co.

Hackney, South.—Buildings on t eastern side of Chatham Place, Hackn on the application of Mr. P. Currey, behalf of the Governors of St. Thoma Hospital estate.

Islington, West.—Iron and glass ro over a coal yard at the premises of Tylor and Sons, Limited, on the applic tion of Mr. W. C. Thorp, on behalf of Tylor and Sons, Limited.

Lewisham.—Addition at house kno as Mount Edgcombe, Canonbie Ro Honor Oak, on the application of M H. J. Hewlitt, on behalf of Mr. E. Roskilly.

St. George, Hanover Square.—T oriel windows, an addition and a ba window, at No. 10, John Street, Mayfa on the application of Messrs. J. S. G son, Skipworth and Gordon, on behalf Mr. J. Carmichael.

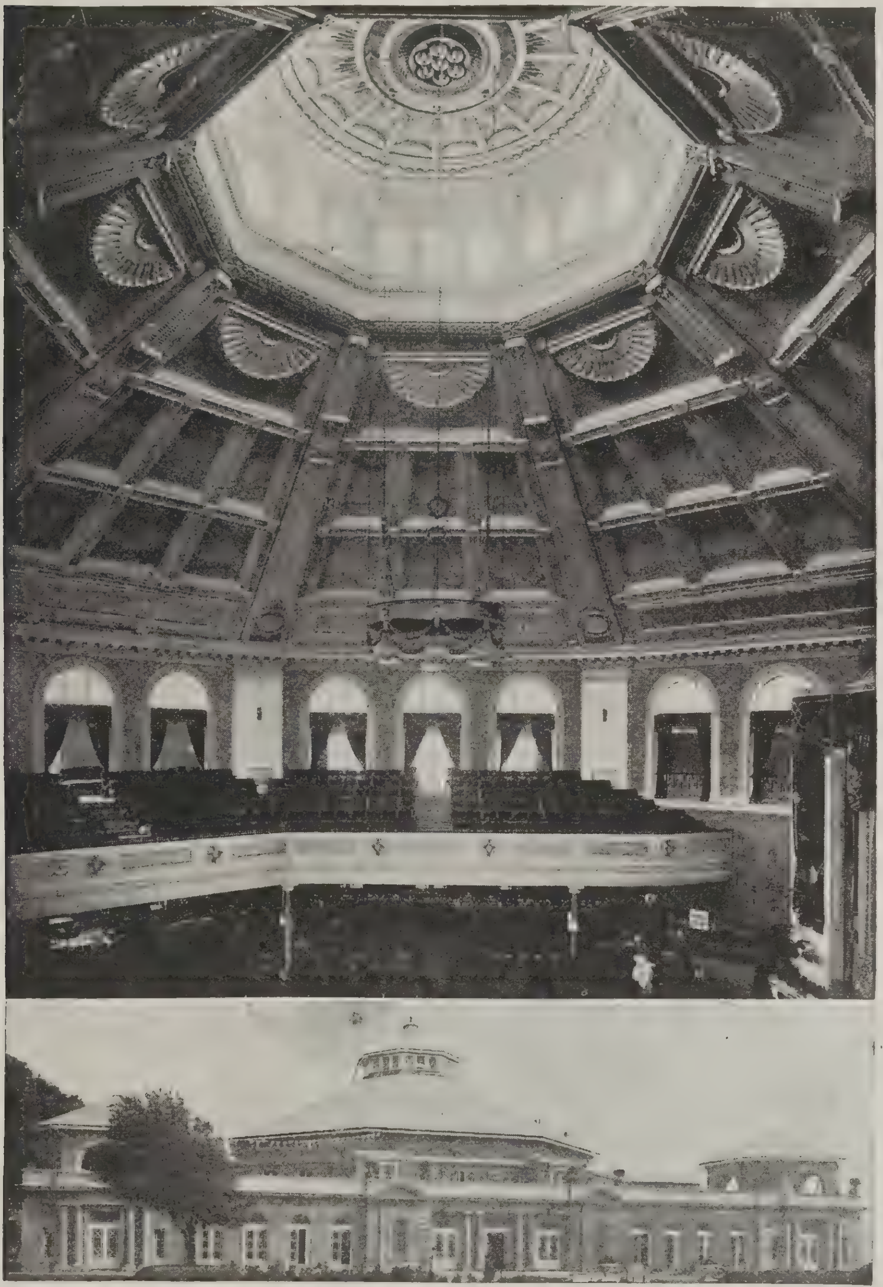
Strand.—Main buildings on the east and western sides of Regent Str between the Quadrant and Oxford Circ on the application of Mr. John Murray.

Wandsworth. — Bay-windows a porches to twelve houses on the south side of Glencairn Road, Streatham, on t application of Mr. W. G. James, on beh of Mr. D. Weston.

(*Continued on page* xx.)

THE KAHN SYSTEM of REINFORCED CONCRETE

THE TRUSSED CONCRETE STEEL CO., LTD.



THE VILLA MARINA KURSAAL AT DOUGLAS, I.O.M.

Architects—Messrs. Percy Robinson, F.R.I.B.A., and W. Alban Jones.

All the floors, roof flats, large gallery, and the framed conical dome, are carried out on the Kahn System, to the designs of The Trussed Concrete Steel Co., Ltd. The dome here shown is 109 ft. span, and the largest in the British Isles. The Hall will seat 3,000 people.

THE TRUSSED CONCRETE STEEL CO., Ltd.,
52, CAXTON HOUSE, WESTMINSTER, S.W.

N.B.—The Trussed Concrete Steel Co., Ltd., will be glad to collaborate with Architects on any construction, and place at their disposal the skill and experience of their Engineering Staff, and invite enquiries for their Handbook and literature.

PROJECTED NEW WORKS

(*Continued from p. 182.*)

Houses, etc., Chelmsford.

Plans of thirty-three new houses and of new County Council Offices, Chelmsford, have been passed by the Town Council.

Heating and Lighting, Scarborough.

Scarborough Board of Guardians have approved the installation of a heating and lighting system in the workhouse at an estimated cost of £6,252.

Picture Palaces, Hull.

A picture palace is to be erected at the corner of Anlaby Road and Perry Street, Hull. Mr. James E. Adamson is the architect. Hull Corporation Works Committee have approved plans for picture halls in Newland Avenue and in Sherburn Street, Hull.

Buildings, York.

York Street and Buildings Committee have approved the following plans:—Stabling and workshops, Peter Lane, Brown Brothers and Taylor, Ltd.; workshop, Railway Street, T. Dick; additions and alterations, Linton Lodge, St. Peter's Grove, G. Wilson; alterations, Clarence Street, H. Hall and Sons; extensions to pump house, Aldwark, J. J. Hunt, Ltd.; extensions to office block, Haxby Road, Rowntree and Co., Ltd.; alterations to premises, 3 and 5, Hungate, P. T. Fowler; lock-up shop, Goodramgate, Tadcaster Tower Brewery Company.

Pier, Aberystwyth.

Plans of a proposed new pier, landing stage, and pavilion have been submitted to the Aberystwyth Town Council on behalf of a South Wales syndicate. It is proposed to construct a pier from the Castle Point outwards, with a pavilion at the land end and a landing stage at the other end. The work, which is estimated to cost £25,000, will take two years to complete.

Picture House, Bradford.

Plans, prepared by Messrs. Abraham Sharp and Son have now been approved by the Building Committee of the Corporation for an amended scheme, with increased accommodation for a new picture hall to be erected on land in Cross Lane, Great Horton. Seating accommodation is provided for 800.

Buildings, Slough.

The following plans have been approved: Alterations and additions to a laundry at Cliveden, Taplow, for Mr. W. W. Astor; additions to "The Nook," North Park, Gerrards Cross, for Mrs. Hope-Smith; house, Orchehill Avenue, Gerrards Cross, for Mr. W. Best; garage, Manor Cottage, Gerrards Cross, for Mr. T. D. McMeekin; cottage in grounds of Stoke Poges Golf Club; and police cottage on the Bath Road, Taplow, for the Bucks Standing Joint Committee.

Harbour Extensions, Leith.

Leith Dock Commissioners have resolved to proceed with the construction of new harbour accommodation between Leith and Newhaven. They will provide as soon as possible (1) a dock for trawlers and other fishing craft, with all the necessary equipment; (2) quayage 1,000 ft. in length for other trades; and (3) a breakwater extending from Leith to Newhaven, to cost about £100,000. The total cost of the work is estimated at £250,000 to £300,000, and the construction may take from six to eight years.

Town Hall, Stockton.

At a recent week's meeting of Stockt
Town Council attention was drawn to t
proposed new municipal building. It w
intended to occupy the Borough Hall si
and the land adjoining which the Co
poration had recently purchased, so as
accommodate the borough officials' d
partments, and to enlarge the Boroug
Hall to twice its present size. Later
scheme would be submitted as to wh
was to be done with the town hall.

Seashore Pavilion, Skegness.

Earl Scarbrough's garden pavilion,
be erected on the foreshore at Skegness,
to be of Elizabethan design. There w
be a 107 ft. frontage, and a verandah a
loggia will extend the length of the sou
side. The café on the ground floor w
be 41 ft. by 18 ft., and the roof garden ca
80 ft. by 30 ft.

Business Representatives' Tour.

A novel form of award to the winners
a representatives' competition has be
created by the American allies of Mess
Robert Ingham Clark and Co., Lt
Messrs. Pratt and Lambert Inc., varni
manufacturers, of New York, Buffalo a
Chicago and Bridgeburg (Ont.), who e
ploy upon their staff between seventy a
eighty representatives. The award, whi
will be given to the first twelve winners
the competition, will take the form of
trip to Europe lasting a month, and w
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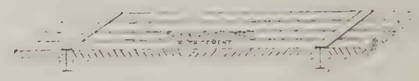

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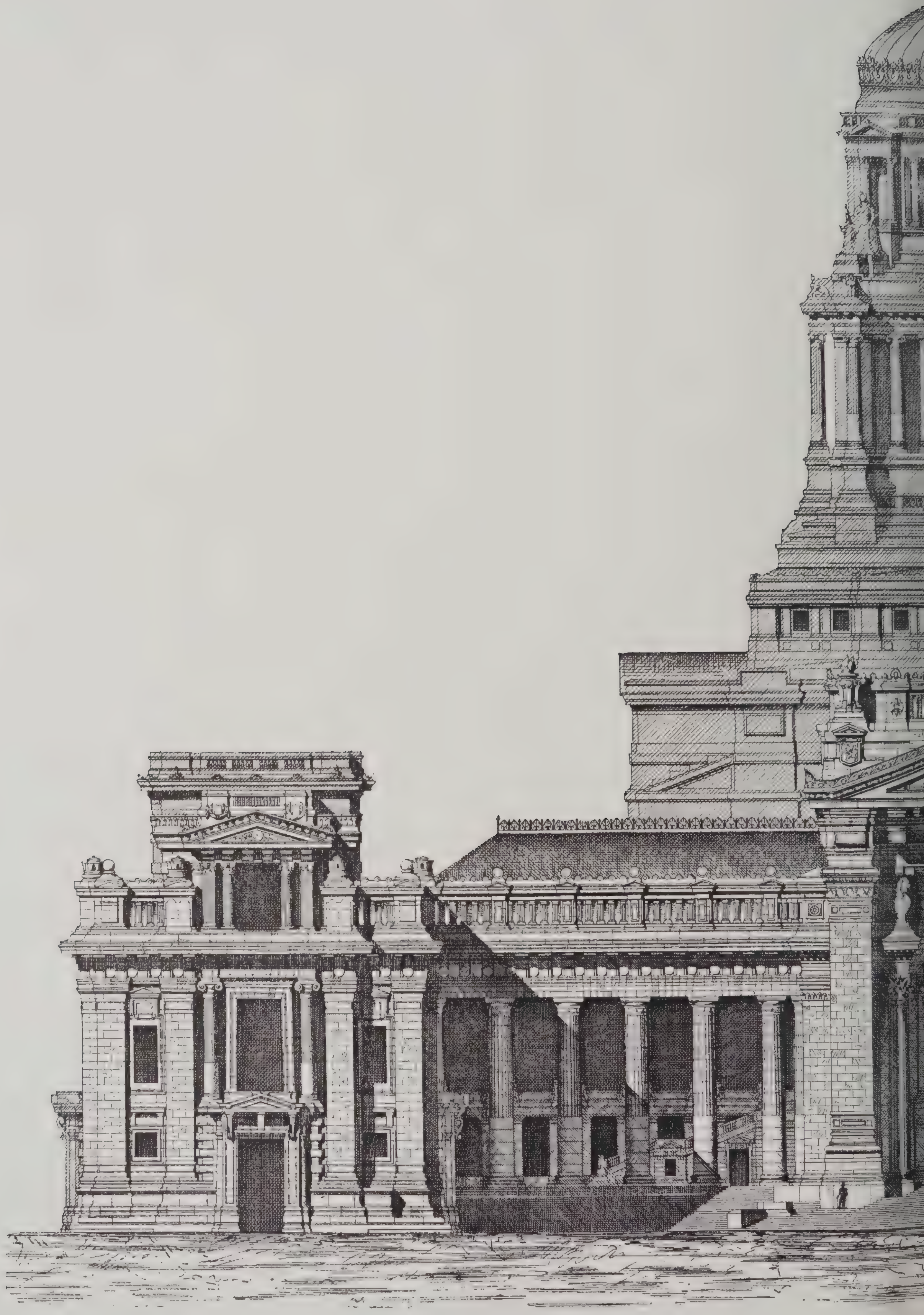

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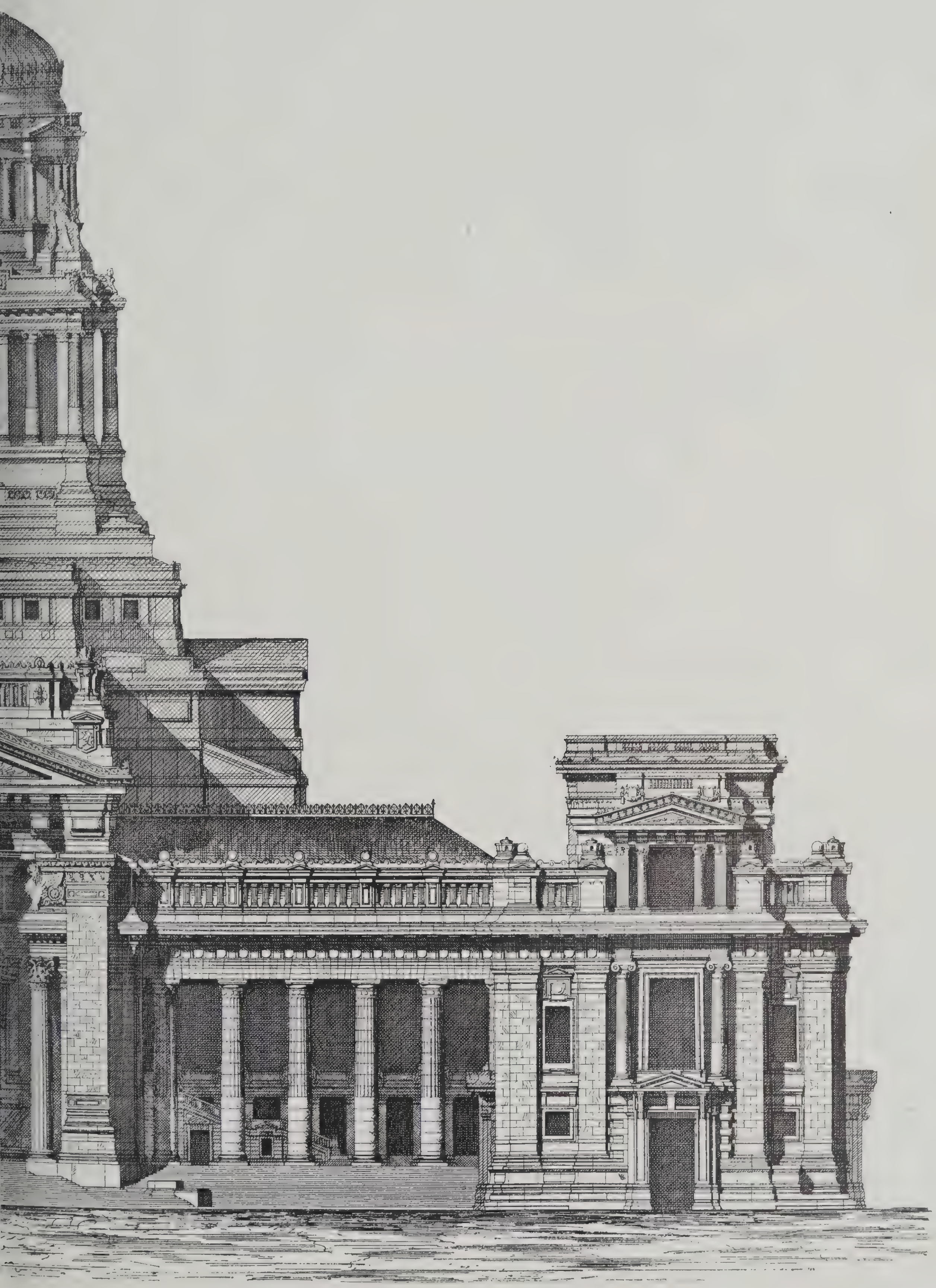
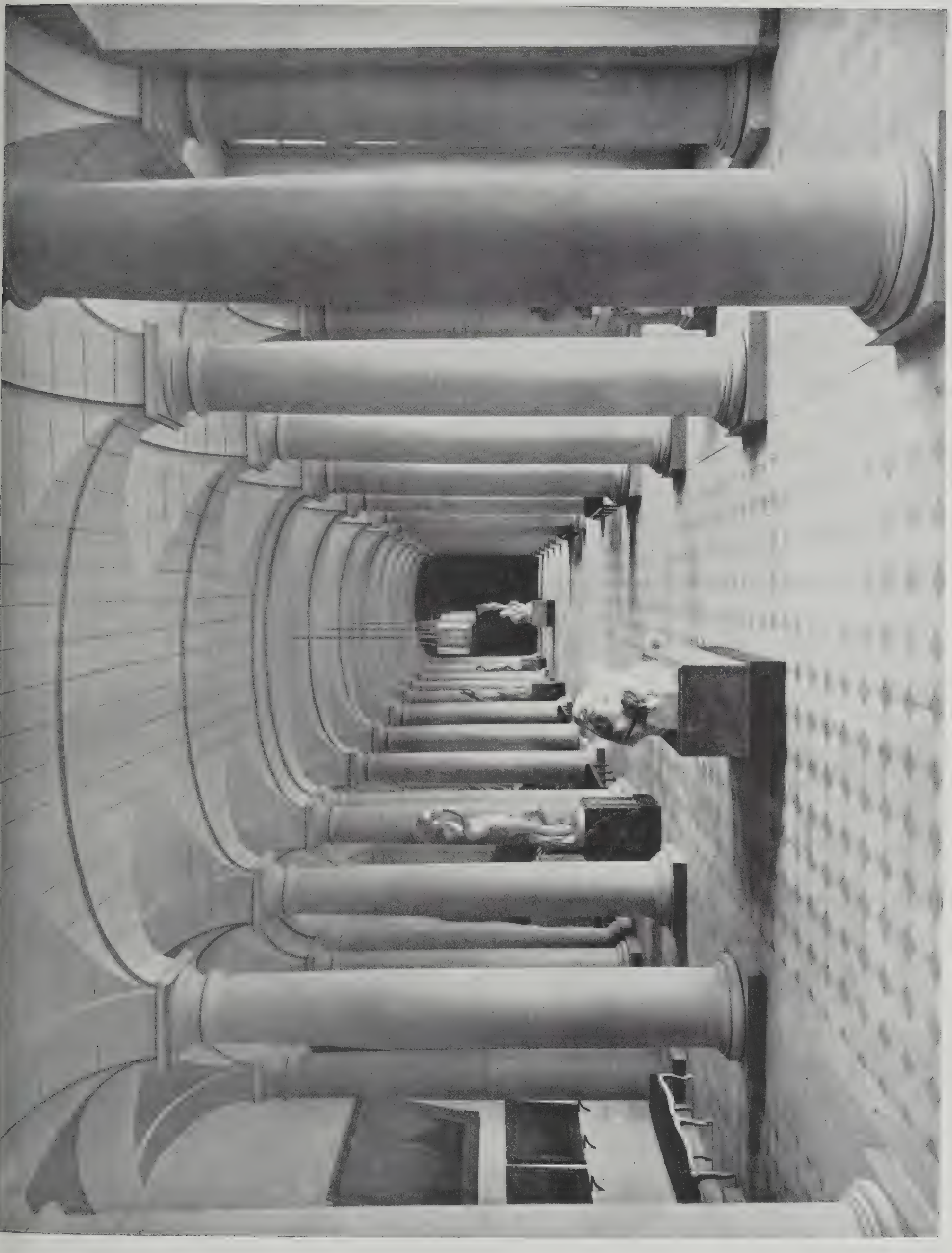


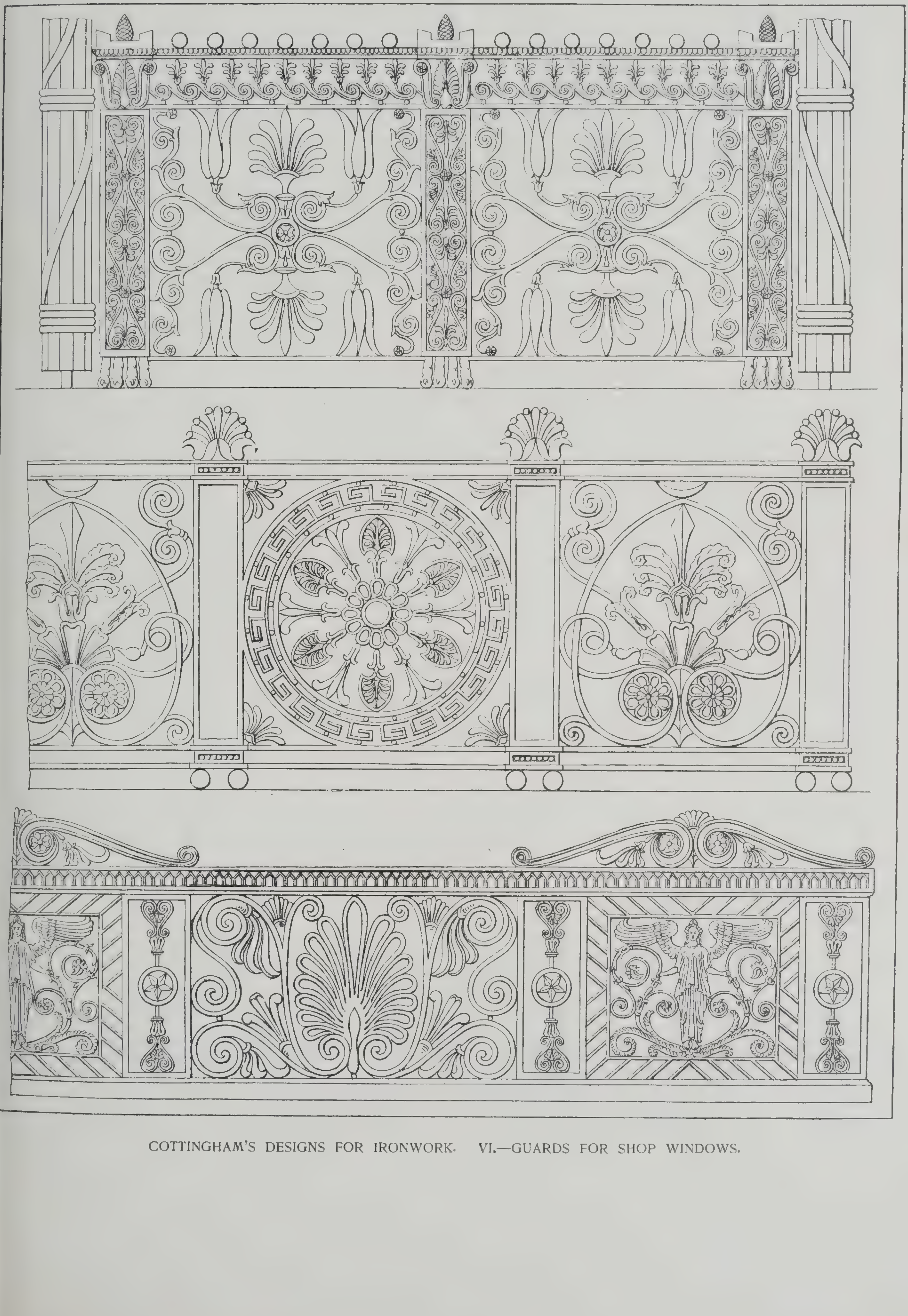
S. I.—FRONT ELEVATION.

CHITECT.

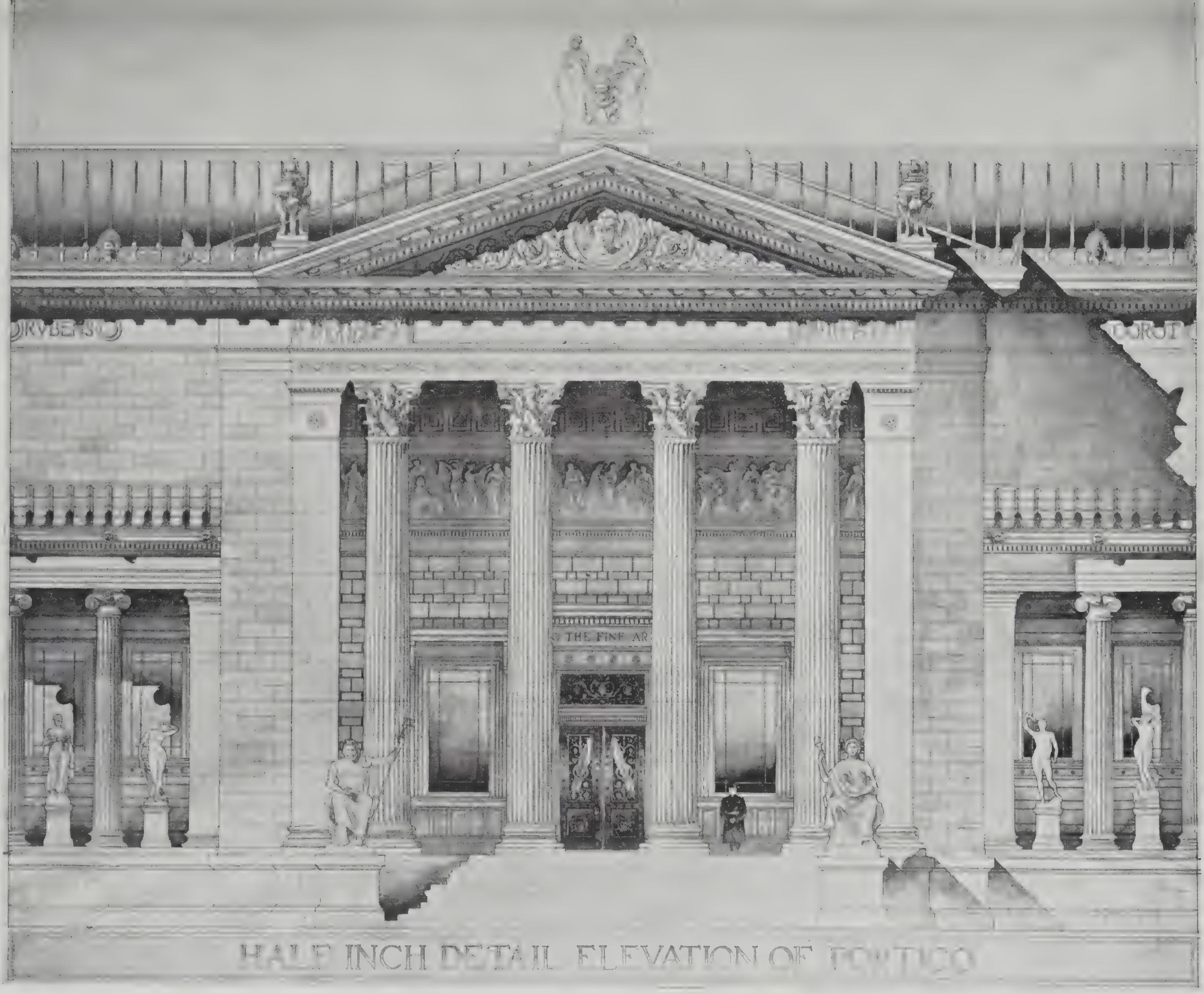


PALACE INTERIORS. IV.—COMPIÈGNE: THE VESTIBULE.

JACQUES-ANGE GABRIEL, ARCHITECT.

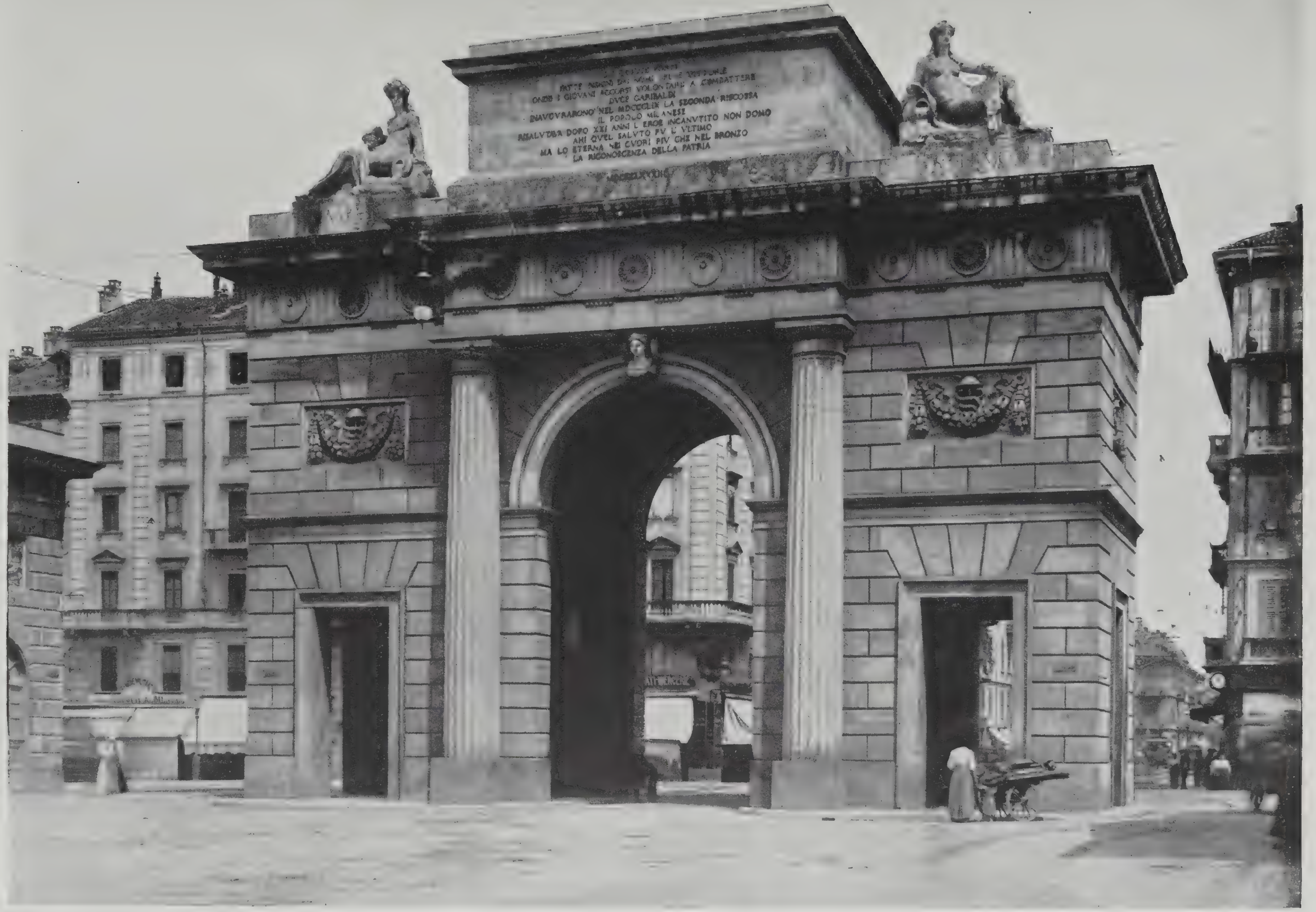


COTTINGHAM'S DESIGNS FOR IRONWORK. VI.—GUARDS FOR SHOP WINDOWS.

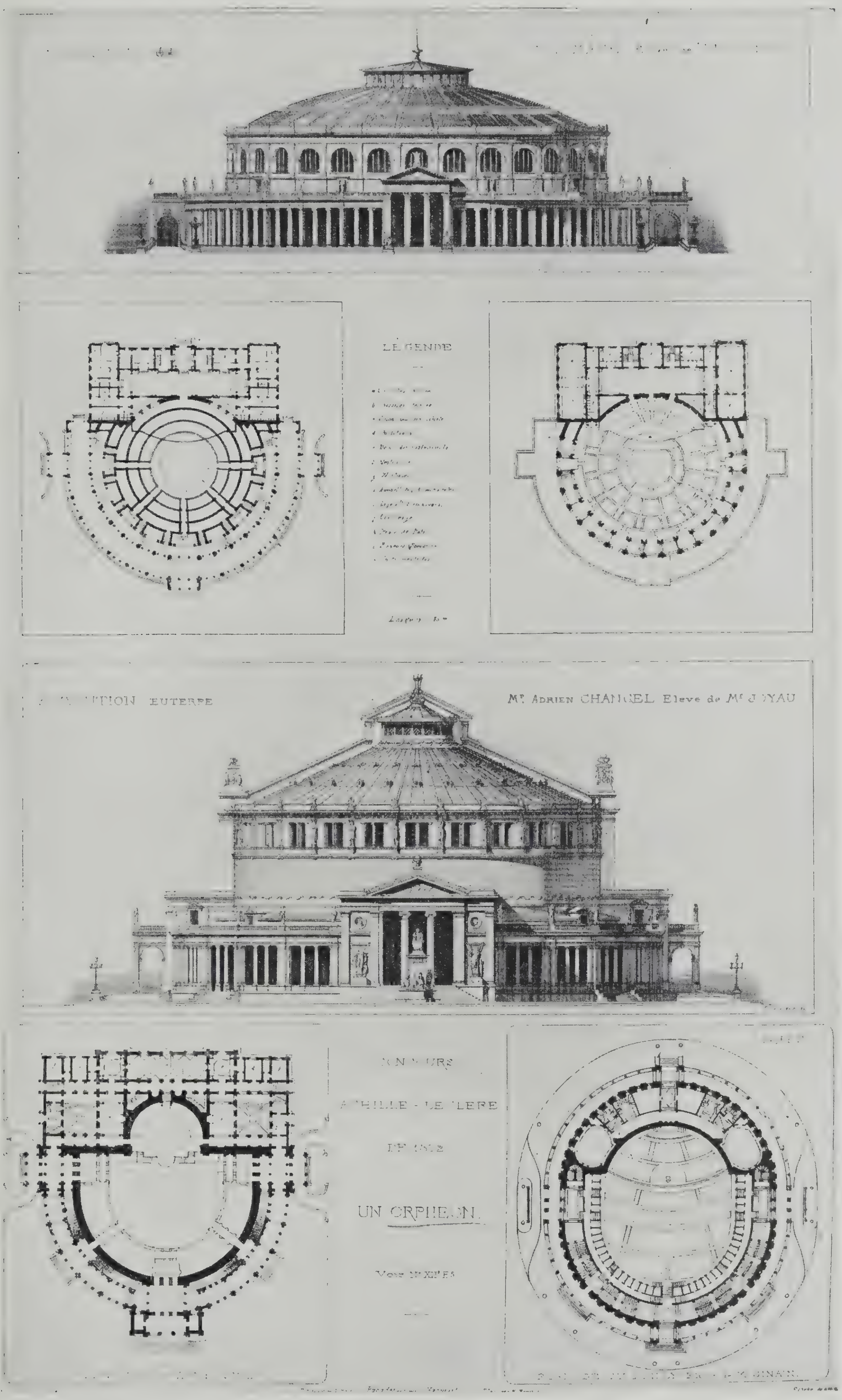


STUDENTS' DRAWINGS. X.—ROME SCHOLARSHIP IN ARCHITECTURE: AN ART GALLERY IN A PUBLIC PARK.

BY G. R. F. COLE.

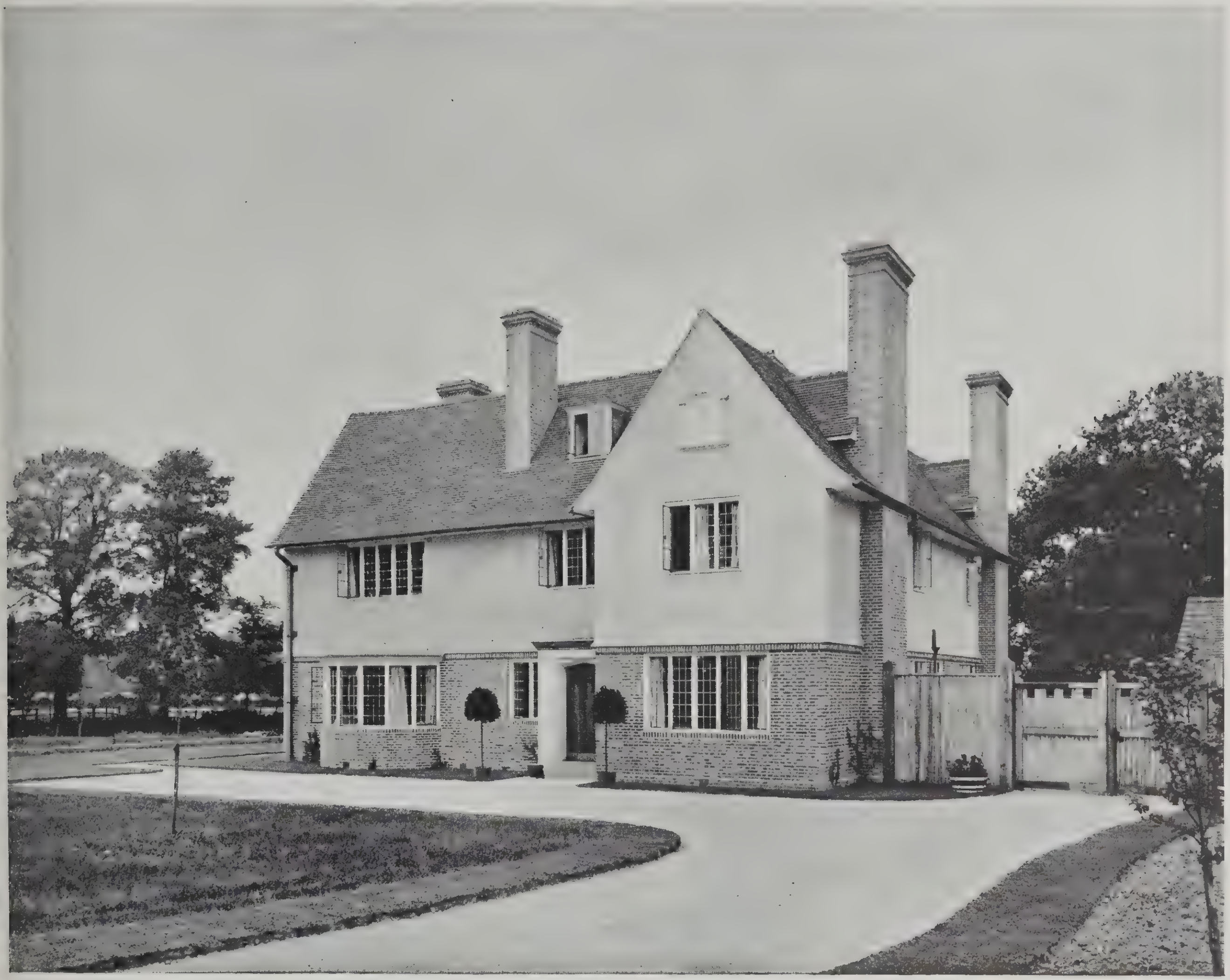


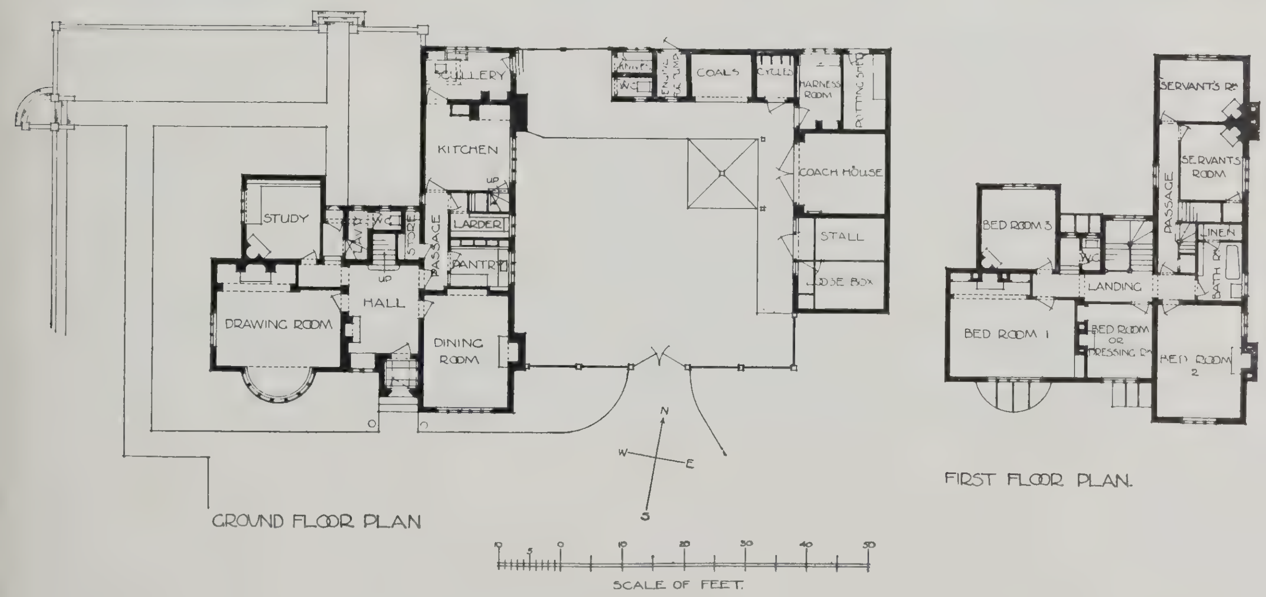
MONUMENTAL ARCHITECTURE. XI.—THE GARIBALDI GATE, MILAN.



STUDENTS' DRAWINGS. XI.—DESIGNS FOR A CONCERT HALL.

BY M. L. MACE (UPPER), AND M. ADRIEN CHANCEL (LOWER.)





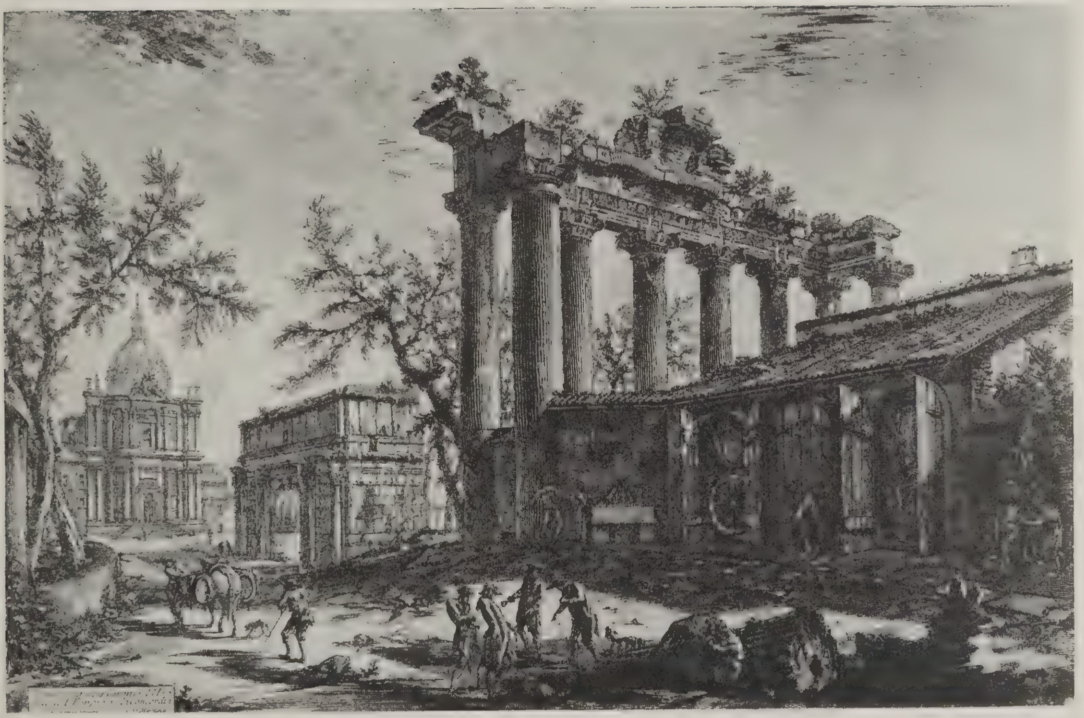
MODERN DOMESTIC ARCHITECTURE. XXVI.—"COOLDERRY," LAPWORTH, WARWICKSHIRE.

ALAN BRACE, ARCHITECT.

THE ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, March 18, 1914. Volume XXXIX. No. 1002.

No. 76.



(From Piranesi.)

THE ARCHITECTS' & BUILDERS' JOURNAL.

MARCH 18, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1002.

The London Labour Dispute.

IN the seventh week of its wearisome duration, the London building-trade dispute assumed a new and a distinctly more hopeful phase; for then there dawned a fair prospect that the matters at issue would be settled by conciliation. Unfortunately this hope was soon dashed by the London Master Builders' Association, who, on Friday last, refused to accept the invitation of the National Federation Council to a conference which would include other trades than those actually involved in the dispute. This was exceedingly disappointing, because both sides having become heartily tired of an exhausting struggle in which neither party could have the least hope of securing any material gain that would be at all commensurate with the huge loss which has already materialised on six or seven weeks of idleness—a period of almost unmitigated waste and desolation—there was the greater hope of chastened and effectual counsels. Temper had been assumed to have died down; and, as Wordsworth says, "Wisdom is ofttimes nearer when we stoop than when we soar." On both sides there has been enough of soaring; although it may be cheerfully admitted that, on the whole, the dispute has been conducted with unusual moderation on both sides. When the men declared that they "could not be starved into submission," it was quite as easy to condone the rhetorical exaggeration as to count for pardonable optimism in the employers the statement that men were quite numerously signing the obnoxious document and resuming work; but neither declaration was really relevant to the main issue, which was, whether or not the unionists were prepared to give satisfactory guarantees that they would keep the agreements made in their behalf by their duly accredited representatives.

That this elementary principle of honesty had been violated in a score of instances within a few months was at once the effective cause of the lockout, and the logical justification of the employers' somewhat dramatic repudiation of the working agreement. If human affairs were strictly governed by logic, the employers' position would have been unassailable; but to act with logical consistency is not always to act with wise discrimination; hence the heart-searchings as to whether the employers were quite justified in bringing the whole building industry of London to a more or less complete standstill simply because some few members of the Association had suffered loss and annoyance from casual defections by some few members of the trade unions. So far as we are acquainted with it, the public mind has been perplexed and rather scandalised by the spectacle of wholesale penalty for retail default; for it seemed evident that the bulk of the employers had not suffered, as the bulk of the unionists had not sinned; and the claim that the employers were fighting for an abstract principle left the lay mind cold. There was, nevertheless, some potency in the platitude that it was the bounden duty of the unions to maintain discipline in their ranks; and their lamentable failure in respect of this elementary obligation has gravely discredited them in the estimation of a public that admires a fighting body on t strict condition that its fighting is fair.

But, while the trade unions have suffered this serio loss of prestige, the employers, on their part, wou have stood much higher in the public regard if th had shown, not less firmness and determination, b more patience and tolerance in dealing with a situati of so much difficulty and complexity that treatment it *de haut en bas* was inevitably more facile th effectual, and has, we fear, set the attitude and obje of the employers in a wrong light for those who cann be expected to be acquainted with the nuances of t dispute. It was necessary, no doubt, to bring the tra unionists to a more vivid sense of their obligatio and responsibilities; but over-severity is seldom poli in this country. "*Tu l'as voulu*" is as cynical as Sy dicalism, and the measures adopted were too drastic warrant the slightest hope of immediate success, sin it was a foregone conclusion that the men wou neither entertain the new and strange proposition o pooled monetary guarantee, nor, by signing an in vidual undertaking to work peaceably with no unionists, forsake suddenly and completely the pai fully established principle of collective bargaining.

What has never been made sufficiently clear to t general public is the strange failure—no matter w was responsible for it—to deal in detail with tho sporadic and capricious strikes—to stamp them immediately on their occurrence. It was plain that t strikers were acting in defiance of their unions. Sure the unions could on no grounds object to the prom importation of other unionists or of non-unioni to take up the work so wantonly abandoned. Th is at once a plausible and an ignorant view. takes no account of a vital factor—the very liberal co struction which strikers are apt to place on t innocent-looking expression "peaceful picketin which, as employers know only too well from exp rience, is apt to be translated into ugly scenes violence. A heavy responsibility would be incurred risking their repetition.

Another matter that is not so clear as it might be, a of which the explanation must be left to the disputan is the postponement until now—after seven weeks devastating idleness—of reference to the Conciliati Board of the National Federation of Building Trad Employers of Great Britain and Ireland. On a sup ficial view, this reference might as well have be arranged first as last, to the possible avoidance of enormous waste of money; of much acute sufferi deserved or undeserved; and of exasperating dela losses, and inconveniences affecting many oth interests besides those directly involved in the quarr But perhaps suspension of business has been useful bringing both parties to a graver sense of their mut dependence. It is a clumsy, frightfully extravaga and altogether absurd method of securing this or a other desirable object; but war—industrial or oth wise—is always wasteful and barbaric.

"Better late than never," the announcement th the Executive Council of the National Federati had consented to act as mediators came as a welco elief from a fatuous situation of absolute deadlock. here was a hopeful ring in the mere terms of the ederation's resolution: "That before any definite ction is taken by the National Federation, the Council f the London Master Builders' Association and two epresentatives of each of the London branches of the ade unions involved be invited to meet the National uilding Trades Conciliation Board in conference, for e purpose of considering and suggesting some satis- ctory means of securing the honourable observance trade agreements."

As we have already said, the London Master uilders' Association have seen fit to decline this vitation; but surely so reasonable and so temperate appeal cannot ultimately fail of its due effect. ut, nevertheless, we see every ground for hope at the wisdom and experience embodied in e National Conciliation Board, and the com- rative neutrality of its members—most of whom e level-headed men of the Midlands and the North -will be equal to the satisfactory settlement of dispute that has already inflicted more misery than merits can easily be held to condone; and we should as much disappointed as surprised to find that by is untoward turn of events the new spirit, and the oler atmosphere with its greater freedom from the ere smoke of the conflict, had failed of their antici- ted effect of securing peace with honour. Concilia- on, we trust and believe, is merely postponed until the nditions can be satisfactorily readjusted. J. F. R.

Imperial Arts League Amenities.

HERE was an interesting discussion at the annual meeting of the Imperial Arts League, held last Thursday night at Leighton House, when the port of the Council with reference to its share taken the movement for a Ministry of Fine Arts was pre- nted. The Report stated: "The League may justly im that its influence has been considerable. . . . ey feel assured that in view of the immense import- ce of the project their efforts to bring it to fruition ve the cordial support of the League." There- on the malcontents, headed by Mr. C. F. A. ysey, entered a demurrer. A good many members the League had no faith in the idea, declared Mr. ysey, and to adopt the report as it stood was to pre- nt any free discussion of the scheme. Mr. Howard eaded for delay, and moved that the last sentence have quoted of the report should be deleted. is attitude illustrates not only the existing antagon- n to the proposal, but also the chief difficulty with ich a Ministry of Fine Arts would have to contend the failure of any considerable body of artists to ree among themselves. Yet we are not discouraged; , as Mr. Reynolds Stephens justly remarked, as the bject is analysed, the advantages come into greater ominence and the disadvantages become much more bulous. The plain fact remains that the need for ne central control in art matters becomes even more sistent; that without such a Ministry charged with disbursement of a general fund, the struggling ung artist is virtually debarred from undertaking an bitious work; and that the spending of a million or on art education without doing anything to create a rket for the products of the artist so educated is nply a piece of national silliness.

Ancient Monuments.

HE Report of the Inspector of Ancient Monuments for the year ending March 31st, 1913, makes it clear that the care and skill exercised by this partment of the Office of Works are beginning to be ognised by the owners of historical relics. Mr. ers, the Inspector, states that twenty-two new monu- nts came under the control of his department ring the year, raising the whole number in its charge 140; among them were Framlingham and Richborough Castles, St. Botolph's Priory Church at Colchester, Jedburgh and Culross Abbeys. It is sometimes forgotten that the "preservation" by the Ancient Monuments Branch often involves extensive restorations, calling for the exercise of great expert knowledge and discretion in the solution of difficult structural problems. The high degree of success that has attended the department's labours proves its competency to handle these problems, and amply justifies the extension of powers conferred upon it by the Ancient Monuments Consolidation and Amendment Act, whereby the Commissioners can take the initiative in protecting monuments threatened by the neglect of their owners. Certainly the work done by the Commissioners goes far to remove the familiar objections to the "official" handling of art questions, and suggests the results that might be achieved by a properly constituted Ministry of Fine Arts acting in a less restricted sphere.

"Least Expensive Building Possible."

AN amiable trait in town councillors of a certain well-marked and widely distributed type is their frank and innocent delight in cheap building. A robust instance comes from Norwich, where it is proposed to build new municipal offices at the not very extravagant cost of £12,800. In the course of the debate upon this surely very mild proposal, a member confessed very candidly—if a local report of the proceedings is to be trusted—that "he did not want a good building put up; he wanted the council to spend the least possible amount. . . . What they wanted there was the least expensive building that could possibly be erected." Happily this gentleman's ingenuous but depressing view did not prevail, and the town council have resolved to brave the anger of the local Ratepayers' Association, who hold that "no place with its rates standing at 11s. 6d. in the pound can afford to expend £12,800 for new offices," although apparently Norwich can afford to go on paying about £460 a year for inadequate accommodation. Perhaps it would be better for Norwich to wait until it can afford to expend twice of thrice the amount of the proposed "enormous" sum.

Indian Art.

IN arranging an exhibition by the Calcutta School of Fine Arts, Paris has once again convicted us of our strange habit of neglecting obvious opportunities. Considering the intimacy of our association with India, and more especially the necessity that has been laid upon us, by the adventure of constructing the new Delhi, to seize every means of mitigating our profound ignorance of the spirit and substance of Indian art, it is we, rather than the French, who should have conceived the happy idea of holding such an exhibition. Two brothers, nephews of the poet Rabindranath Tagore, dominate the show, the elder, Abanindra, contributing the largest number of pictures, as well as standing pre-eminent in quality. Described as "one of his most inspired paintings" is that which was presented by the artists of Bengal to the poet on his receiving the Nobel prize. "It symbolises," says a correspondent of "The Times," "the revival of the flame of poetic tradition in India. At the portal of an unlighted Temple an aged Brahmin priest turns to greet the dawn, one rosy beam of which just touches him and the lintel of the doorway. Of a profound simplicity, it yet thrills with the emotion of what must have been to all Indian artists a great moment." We sincerely share this writer's hope that this remarkable collection may be seen in London before it is returned to India. Mr. E. B. Havell, who founded and for many years directed the Calcutta School of Fine Arts, and who, in his books and lectures, has done so much to stimulate our interest in Indian art, should have no difficulty in rendering us this further service.

HERE AND THERE.

LAST week, in my survey of Whitehall, I got as far as the War Office, from which point we may now proceed down the remaining length of the thoroughfare.

In front of the War Office is a superfluous monument of the late Duke of Cambridge, the sculpture by Captain Adrian Jones, the pedestal by the late John Belcher. It is not a stirring achievement in any sense, though decidedly better than the monument of the Duke of Devonshire at the entrance to Horse Guards Avenue. The latter Duke looks thoughtfully at Kent's delightful building on the opposite side of the way, and properly so, for Kent gives ample evidence of his brilliant architectural gifts in that group of buildings which is as well known as anything else in London. Next door to it is a real architectural gem—Dover House—now occupied as the Scottish Office. It has a beautiful little portico opening into a small circular staircase hall covered by a low dome, these latter features having been added in 1789 from designs by Holland, the house itself having been built fifteen years earlier to the design of James Paine. It has been a common practice, after mentioning such big names as Vanbrugh and Chambers, to speak of "Paine and others" as though they were all a rather miscellaneous crowd; but this part of architectural history will have to be rewritten.

* * * *

The Banqueting House is on the other side of the way. Mr. Gotch would have us abjure our belief that Inigo Jones was responsible for this beautiful building, putting forward a most authoritative account to prove that John Webb deserves the credit for the design. It has been the custom to speak of there being two sets of designs for the projected new palace—one published by Campbell about 1720, the other published by Kent seven years later, and both have been generally attributed to Inigo Jones. Mr. Gotch, however, points out that they are by no means the only schemes devised for the palace, there being no fewer than seven in all; and having ferreted out all the drawings in the Worcester College and other collections, photographed them, and thus, for the first time, set them all out together for purposes of comparison, he comes to the conclusion that "it seems clear that the preparation of the designs for the palace was not undertaken until late in the reign of Charles I., when he was already in the hands of the Parliament; and that it was Webb, acting (in the absence of Inigo Jones) as Deputy-Surveyor of the King's Works, who prepared the whole series." This is certainly a surprising conclusion and not one that everybody will accept, those who cling to the old belief being well represented by Mr. Statham, who says in his "Short Critical History": "It is something like the case of Mozart and Süssmayer. Mozart did not live to finish his Requiem, and his pupil Süssmayer finished it for him; but no one doubts that the great things in Süssmayer's portion were derived from Mozart, because none of Süssmayer's acknowledged work shows signs of such genius. The case of Inigo Jones and Webb seems to be exactly a parallel one." Whatever may be the exact truth of the matter, it is at least incontrovertible that the Banqueting House was the only part of the new palace which was ever carried out.

* * * *

By the time of James I. the Palace of Whitehall which Wolsey built, stretching in rambling fashion from the river to St. James's Park, had become almost ruinous, so swept had it been by fires: and when the old Banqueting House was destroyed by another fire in January, 1619, it was decided forthwith to replace it with a new building, the one that now looks down upon
Whitehall so majestically. The new Banquetin
House was started on June 1st, 1619, and finished b
March 31st, 1622, the total cost having been £15,00
Nicholas Stone, the master mason on the job, receive
4s. 6d. a day, the wages of the ordinary workme
ranging from 1s. to 2s. 6d. a day. The building ha
been renovated on several occasions. In 1798 th
staircase at the north end was added by James Wyatt
in 1829 Sir John Soane carried out what wa
practically a complete restoration of the façade
and in 1837 some further renovation was done und
the direction of Sir Robert Smirke, while the gre
ceiling painting by Rubens, for which the arti
received £4,000, has been restored on several occasio
—in 1785 by Cipriani (who was paid £2,000 for h
work), and later by Seguier, Rigaud, and, mo
recently (1906), by Messrs. White, Allom and Co.

The building is now used as the museum of th
United Service Institution, but in the days of o
grandfathers was known as the Chapel Royal, havi
been turned into such by George I., though never co
secrated. The proportions of the interior, a doub
cube of 55 ft., are excellent, though the purist ma
raise a point about the impression of a two-floor
building which the fenestration suggests from the ou
side.

* * * *

It was in the old houses at the back of the Banque
ing House that Her Majesty the Queen made a litt
tour the other day. They are a queer collection, a
sadly mauled to make them serve as Governme
offices, but they contain some splendid work, Pembro
House especially. The new Board of Trade offic
will sweep these old houses away. Let us hope th
one of the ten selected architects will give us a buildi
worthy of so honoured a site. The secret of the hap
ten is not yet out, though an inspired rumour h
reached me, recording the inclusion of architects w
cannot be considered great, and the exclusion of so
very well-known men—one firm in particular.

* * * *

Sir Aston Webb's United Service Institution sta
next to the Banqueting House and suffers by comp
son, its scale being niggardly. A far better piece
work adjoins it. This is Gwydr House, an eleg
design by an obscure man—Marquand, a surveyor
the Office of Works—rejoicing in a graceful c
tral feature of stone set in the midst of plain br
walling.

A little grass area, with trees, here breaks the line
brick and stone, and Clive stands boldly, though o
temporarily, on the spot formerly occupied by Grinl
Gibbons's beautiful statue of James I. now transfer
to a grass plot next the Admiralty in St. James's Pa
A short distance further south, and set well b
from the roadway, is Montagu House, the town r
dence of the Duke of Buccleuch—a sort of Fre
chateau well Anglicised, or, perhaps more correc
well Scotticised, in view of the fact that the archit
who put it up, in 1860, was George Burn.

Retracing our steps, we find the Treasury on
opposite side of the street. Remains of Wols
building are somewhere behind the building that
John Soane refronted, his own work having in t
been replaced by Sir Charles Barry's familiar faça
It is a most invigorating piece of work, this Treas
front by Barry, with its splendid line of columns
bold cornice, and it gives one some idea of what
architect's scheme, for Government offices all the
to the bottom of Parliament Street would have b
like if he had been permitted to carry it out. As thi
are, we have to remain content with Scott's Ho
Office and Brydon's Local Government Board. Sc
building, whatever may be said, by way of extenuat

all the weariness and disappointment occasioned Palmerston's methods (which kept the Goth on : rack for seven years from the time the competi- n was started until the final sanction of the drawings 1861), is a dull essay in Italian Renaissance, with akish bursts of Gotho-Classic ornament wherever portunity offered; Armitage's sculpture in the span- els of the windows is much better stuff than the hitecture which it is intended to embellish, though s far below the fine work which Mr. Montford has ne on the arch that connects the Home Office with L.G.B. building. Brydon was a man of consider- le parts, but his architecture always missed being teworthy. His work at Bath next the Pump Room inspired by the eighteenth-century building, but ks all those niceties of refinement which give the ter so much charm, and it is much the same with the G.B. offices—scholarly to a certain degree, but not entire success, albeit we must remember that the hitect died before his work was completed, and that towers on the Parliament Street front were the rk of his successor.

* * * *

The Government offices have brought us down to e end of the thoroughfare on the west side. Space es not permit any extended reference to the ildings on the other side—which, indeed, are mostly very miserable medley belonging to the late nine- enth century, of unhappy memory, though there is least one redeeming modern building, the erstwhile hitehall Club, erected in 1866 by Parnell, and there e also two or three pleasant relics of the Georgian riod. But no reference to Whitehall could be com- ete without chronicling the two gateways that once mmed it in, the Holbein gateway, which jutted out the west side at a point a little above where the orse Guards now are, and the King Street gateway, hich stood about where Downing Street turns out of e thoroughfare, King Street having been swept away out fifteen years ago when Parliament Street was dened. An interesting record of it is to be seen on e balustrade to the Parliament Square front of the G.B. building, on which two bronze plates are fixed cording the eastern and western boundaries of the rrow little street.

UBIQUE.

THE PLATES.

The "Wick House," Richmond.

THE "Wick House," situated at the top of Richmond Hill, with a magnificent view of the Thames Valley from its back windows, is a fine xample of the domestic architecture of the latter part the eighteenth century as exemplified in a house of moderate size. The front elevation, with its care- lly considered garden walls, is essentially formal in haracter, but the light and graceful treatment of the etails saves it from any appearance of baldness or eaviness. The removal of the glazing bars from the round floor windows is regrettable, and to some extent etracts from the effect as a whole. The design has een attributed to James Paine, but this is impossible decide with any certitude.

alace Interior, Compiègne: Salon des Dames d'Honneur. Jacques-Ange Gabriel, Architect.

References to Compiégne Palace will be found n previous issues of the JOURNAL where our plates ave included other examples of its internal archi- ecture. In the Salon des Dames d'Honneur one an perhaps hardly see the architecture for the ecoration; but a vast and satisfying sumptuous- ess is conveyed by the richly loaded ceiling, door anels, immense mirrors, and exuberant chandeliers, nd not least by the Orientalism that has crept into he ornament of the pilasters.

Chambre des Députés, Paris: Salle des Séances. Jules de Joly, Architect.

The Salle des Séances, where the French Deputies conduct their deliberations, has a chequered history. Originally the room where sat the Conseil des Cinq Cents, it was falling into decay at the time when, in 1827, the Government purchased the old Palais Bourbon, of which it formed part; and its restoration at the hands of Jules de Joly occupied four years. After the Revolution of 1848 it was found that the new room was too small to hold the 900 deputies returned to the Constituent Assembly, and its use was accordingly discontinued, a temporary room made of wood being provided. The latter was demolished in 1851, and the Corps Législatif of the Second Empire then sat in the old Chamber of Deputies till 1870, after which date the Palais remained tenantless for some years. In 1877, when the members of the Lower House returned to Paris, it became known once more as the Chambre des Députés. Elsewhere in this issue we publish a general plan of the Palais in 1810, showing the position of the Salle des Séances in relation to the group of surrounding buildings. The original Palais Bourbon was built by Girardini for the Dowager Duchess of Bourbon in 1722, but Joly, Louis Philippe's architect, metamorphosised it a century later.

Nottingham and Midland Eye Infirmary: Detail of Main Façade. Arthur Marshall, A.R.I.B.A., Architect.

Mr. Marshall's building will be found fully described on p. 190 of this issue, and the plate of this façade which we publish will speak for itself. Exception might possibly be taken to the proportions of the pediment, which is the insistent feature of the façade; but it is at least conceived on courageous lines.

Cottingham's Designs for Ironwork: Lamps, Newels, and Balusters for Staircases.

Cottingham's design for staircase balusters takes one back to an age when lightness and "elegance" were a *sine qua non* for any portion of a house's internal architecture. The balusters show his usual sense of harmonious variety, and the ornamental forms of the swinging lamps are rich in invention.

Student's Drawing: Design for an Art Gallery. By Fred Jenkins.

Mr. Jenkins's drawing was one of the successful efforts in the recent Prix de Rome Competition. Like Mr. E. R. F. Cole, whose half-inch detail elevation of portico we published last week, Mr. Jenkins is of the Liverpool School of Architecture.

Working Drawing: Nottingham and Midland Eye Infirmary. Arthur Marshall, A.R.I.B.A., Architect.

Mr. Marshall's working drawing will be studied with a good deal of interest. As will be seen from the details given, he is one of the English architects who incline to the American system.

THE ETCHINGS OF PIRANESI.

A MOST attractive little volume containing no fewer than fifty of Piranesi's wonderful etchings has just been published by Technical Journals, Ltd., Caxton House, Westminster, at the remarkably low price of 2s. 6d. (post free 2s. 9d.). Nothing of the kind has ever been offered before, and no one who is interested in the subject should fail to secure a copy. The reproductions, which are admirably rendered in double-tone sepia ink on a paper of good quality, comprise a very representative series, including monumental designs, views of Roman buildings, vases, tripods, chimneypieces, etc., and two of the "Carceri" set: the whole being prefaced by a study of Piranesi, the man and his work, by Professor Reilly.

ROBERT STEVENSON: A GREAT ARCHITECT-ENGINEER.

SPECIALLY CONTRIBUTED BY H. BAGENAL.

IN the region of hard fact Robert Stevenson was nearly as remarkable a man as his grandson Robert Louis in the region of fiction. He was engineer, town planner, builder, scientist, marine expert. On the foundation-stone of Waterloo Bridge, Edinburgh, is the following inscription:

> Regnante Georgio III. Patre Patriae.
> Urbis praefecto iterum
> Joanne Marjoribanks de Lees equite baronetto
> Architecto Roberto Stevenson
> Cives Edinburghensis.

Stevenson himself desired that the term *Engineer* be introduced for the proper recognition of the profession. But Doctor Gregory of Edinburgh University, who wrote the inscription, said that there was no such word as *Engineer* to be found in the history of the Arts, and to his authority Stevenson bowed.

It might be suggested that the old word "artifex" might have been used as an approximation to engineer, but those of us who are architects will be glad that Stevenson acquiesced in the term. For Robert Stevenson lived before the full completion of that unfortunate divorce of use from beauty which resulted in the arbitrary division of the building world into architecture and engineering, and which was consummated during the savage industrialism of the nineteenth century.

Before then no such division really existed. The man to have built the first Eddystone in 1696 was not Winstanley—a clever contriver of toys—but Christopher Wren, the greatest constructional scientist of his day, who was to build the great dome.

Smeaton in 1758, in his lighthouse, actually imitated Wren and embedded a chain round the haunch of his floors in the masonry of the tower. John Rennie's Waterloo Bridge, and especially his granite work on the embankment, are held for monuments of architecture. Of Robert Stevenson it was written, "His love for the beautiful rose above all other feelings."

For such men the antithesis of *beauty* was *weakness*; and they were in touch with wide spheres—their achievements may be said in the truest sense to be architectural.

Somewhere in his prose writings Shelley speaks of the Romans as having a special characteristic: they preferred to express the great rhythms of life in action rather than in music or verse. It was theirs to recall a victorious army from the north of Europe and set it to build gigantic aqueducts. They loved to perform feats of town-planning in nameless African settlements. In a more civilised or more specialised state, such tendencies inherent in a practical people are expressed by the great architect or engineer. It is impossible to read the life of Robert Stevenson without being struck by this: he was the raw material of his grandson's romances.

At the age of nineteen Robert superintended the erection of a lighthouse on the Island of Little Cumbrae in the Clyde for his step-father, Mr. Thomas Smith. This was followed by two lighthouses on the Pentland Skerries in Orkney, where he lived for several months in a tent on an uninhabited island. In returning from Orkney in 1794 he sailed in a sloop which carried him to Kinnaird Head and was there becalmed. The captain landed him in a boat, and he continued his journey, but the calm was succeeded by a violent gale which wrecked the sloop, and all hands were drowned. Stevenson considered this a personal experience of God's over-ruling Providence, and believed the more firmly in his destiny.

During winter months he attended lectures at Edinburgh University and continued this practice for some years. He took courses in Mathematics, Chemistry, Moral Philosophy, Logic, and Agriculture; and was
prevented only by lack of occasion from taking t
M.A. degree. Such was *Education* as conceived
Scotsmen of the eighteenth century.

In 1797, on the resignation of his step-father,
was appointed engineer to the Northern Lighthou
Board, and his wonderful career then began. Abo
1801 he was sent on a tour of inspection in the cour
of which he visited Douglas, Milford, Longships, a
Portland Lighthouses, and was incidentally arrest
as a "French spy" on a charge of "examining t
Longships Lighthouse with the most minute atte
tion." But before this date, his great work, the B
Rock Lighthouse, had taken shape in his mind, and
number of models had been made. He had to conte
against public opinion, however. The vicissitudes
the Eddystone were known all over the kingdom, a
after heavy storms people still gathered with telescop
on Plymouth Hoe to see if Smeaton's Tower was saf

There were also his youth and the influence
interested parties against him. But in December, 179
all opposition was withdrawn in a dramatic manner.
fearful storm raged from the N.E., in which, to quo
from Stevenson's diary, "No fewer than seventy s
of vessels were stranded or lost on the coast of Sc
land alone! Many of them, it was not doubted, mig
have found a safe asylum in the Firth of Forth, h
there been a lighthouse on the Bell Rock, on whic
indeed, it was generally believed, the York, of sevent
four guns, with all hands, perished, none being left
tell the tale! The coast for many miles exhibited p
tions of that fine ship. There was now, therefore, b
one voice—'There must be a lighthouse erected on t
Bell Rock.'"

In the year 1800 he landed on the rock and found
literally strewn with wreckage, including a shi
marking iron, a kedge anchor, a cabin stove, a bayon
cannon ball, silver shoe-buckle, crow-bars, and piec
of money. It is scarcely necessary to mention that t
Bell Rock is the same as the Inchcape Rock, on whic
Sir Ralph the Rover tore his hair in a just retributio

Stevenson estimated the building of his lighthou
at £42,685 8s. He used the logarithmic curve for pr

ROBERT STEVENSON.

e—thus giving the building a spread at the base. ne usual profile for a lighthouse is an elliptical curve. ne tower is solid for 21 ft. above high water, up to nich point the granite courses are dowelled. Above, ey are rebated on bed and joggled on the vertical. neaton, at the Eddystone, built his floors on an arch stem resembling flat domes in construction, and erting a thrust at the haunches. This thrust—llowing Wren's example—he resisted by chains dded in the granite. Stevenson, however, owing to e magnificent granite at his disposal, was able to ke his floors part of the external wall of the building simply lengthening the stones of a given course vards to a centre stone, round which they were concted by copper bats. His floors, therefore, became s: a detail of lighthouse construction that has come traditional.

Stevenson and his staff lived in a small beaconuse built of timber upon the rock and carefully made st. The tide rose sixteen feet on this in calm ather, and in heavy seas every wave struck it. cept for a few hours at low tide, it stood a solitary il object above the waves twelve miles from land. oting from his diary:

'The writer's cabin measured not more than t. 3 in. in breadth on the floor, though everything l the appearance of comfort and even of neatness, walls being covered with green cloth formed into nels with red tape and his bed festooned with curns. If on speculating on the abstract wants of man such a state of exclusion, one were reduced to a gle book, the sacred volume, whether considered for striking diversity of its story, the morality of its trine, or the important truths of its gospel, would e proved by far the greatest treasure."

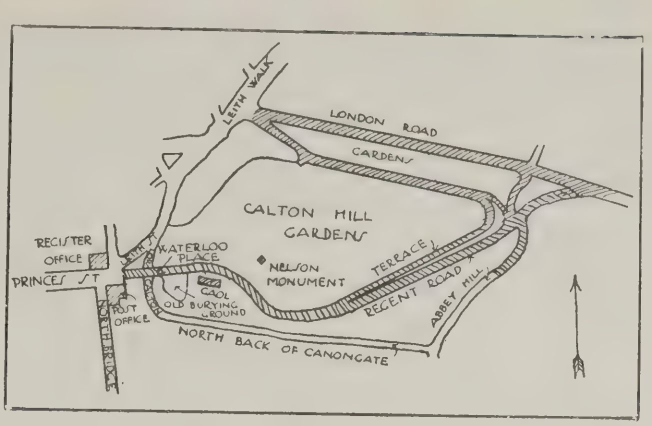
n order to justify work on Sundays Stevenson nted out to his staff and his employers that (i.) the lding might be considered a *work of mercy*, and t (ii.) it would take a year longer to build if the eral low tides occurring on Sundays were to be sted. He, however, held a service for all hands on ndays, and read aloud both the Bible and "that oressive prayer composed by Rev. Dr. Brunton of inburgh."

The lighthouse was begun in 1808 and completed in 1. The masonry rises 100 ft. above the rock. But venson is even more interesting as a town-planner n as a builder. Mr. Richardson, in his interesting ures at University College, mentioned Adam, Play-, and Hamilton, as the transformers of old nburgh into Modern Athens. But the Modern nenians owe as much to Robert Stevenson. Playfair l Hamilton built where Stevenson had planned. In 2 a "commanding and healthful position" for the gaol was urgently called for by the citizens of nburgh. Stevenson saw the opportunity for a really town-planning scheme and made a report suggestthat the gaol should be placed, as previously posed, on the Calton Hill, that Princes Street uld be produced, forming access to the Hill across iaduct, and that the road so formed should be gthened eastward to meet the great road to London he Abbey Hill. At that time Princes Street was ed by a row of houses at the Register Office. An nemorial burying-ground lay between this and the ton Hill, and the Hill itself was as nature made it.

tevenson does not lay any primary claim to ginating the scheme. But he was at least the man onvinced of its importance as to insist on its being ied out.

Ie had to battle with public opinion about the ton burial-ground.

There was a time, indeed, when without encroacht on the burying-ground the road could have been le with a curve to the southward of Hume the orian's tomb; but of late years the walls of the ying-ground have been extended so that the removal of numerous private cemeteries would now be indispensable in carrying the road at an elevation sufficient to command the proper view. If a lower level were adopted in this direction, the fine prospects of the higher road would be lost.



STEVENSON'S EDINBURGH SCHEME.

"By this line of road the level of Princes Street may be conceived to become the summit level of the road which would admit of being made with a uniform declivity from Shakespeare Square to the Abbey Hill, while the acclivity to Bridewell by the present road would be greatly reduced.

"When a communication is opened with the Calton Hill by a bridge from Princes Street, we may expect at some future date to see one continuous street or drive round the hill."

In the hands of a really great town-planner, as in the hands of a great statesman, lies the direction of development of his community for generations. He must make sacrifices for the sake of citizens unborn. He must foresee new markets and routes of commerce. He must perceive the "lines of force" of his community. Thus, to carry a road over a viaduct and embank it across the traditional burying-ground of the city in order that it may traverse a grass-covered hill, is a bold project, and the width of the road might be hazarded at forty feet. But Stevenson suggested otherwise:—

"As the road is not only to be the great approach from the eastward, but likewise to become the chief thoroughfare to the extensive lands of Heriot's and Trinity Hospital, henceforth likely to become the principal building grounds for this great city which is always increasing towards its port of Leith, it becomes desirable for these purposes, and particularly to preserve the interesting view of the Calton Hill, that this road should be not less than seventy-five feet in breadth. . . . Were the street reduced to sixty feet in depth, as has been proposed, the view of the higher parts of the Calton Hill would be hid from the pavement in Princes Street. But the narrowing of the street even to sixty feet in width, with two elegant buildings in the form of pavilions or wings to the bridge, would have an effect equal to what is strikingly observable in looking from the western end of George Street towards the Excise Office."

Owing to expense, Stevenson finally suggested that the bridge be 75 ft. and the new road beyond it 60 ft. over the Calton Hill. This would give, according to his design, three successive widths of road, Princes Street 95 ft., the Waterloo Bridge 75 ft., and the road beyond 60 ft.

The Bill for this scheme of Stevenson's was passed in 1814, and in 1815 the foundation-stone of the Waterloo Bridge was laid.

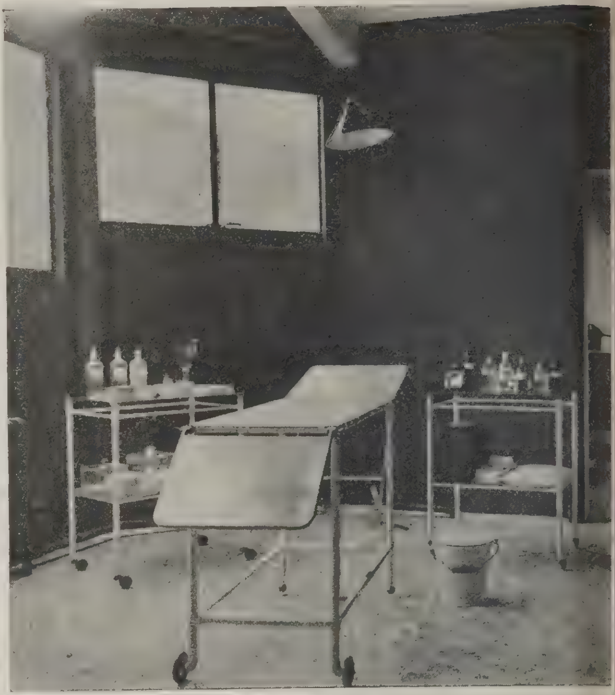
Lord Cockburn, in his "Memorials of His Time," says: "Scarcely any sacrifice would be too great that removed the houses from the end of Princes Street and made a level road to the hill, or, in other words, produced Waterloo Bridge. The effect was like drawing up the curtain of a theatre."

NOTTINGHAM AND MIDLAND EYE INFIRMARY.

THE new Nottingham and Midland Eye Infirmary, opened recently by the Duchess of Portland, may justly be regarded as one of the most complete and up-to-date institutions of its class in the country. Mr. Arthur Marshall, A.R.I.B.A., of Nottingham, whose plans were selected in competition, possesses expert knowledge and vast experience in this class of building, and has grappled successfully with the planning of this new addition to the philanthropic institutions of the city of Nottingham. The peculiar and irregular site in the Ropewalk, where a fall of 18 ft. from front to back rendered the planning a matter of considerable difficulty, has been overcome in the most satisfactory manner.

The large out-patient department is entered on the lower level from Oxford Street. A stepless entrance leads into the large waiting-hall, capable of accommodating a hundred or more, and fitted with specially-designed oak seats. The hall is both spacious and lofty, and is ventilated by means of an electric fan. A little marble fountain is built in the wall at one end. Two doors lead directly from this hall into the large consulting room, a spacious room equipped with dark rooms, microscopic room, and a dispensary, by which the patients pass out after examination or treatment. The service entrance is also approached from Oxford Street, where a special yard is provided for the delivery of coals, food supply, laundry, etc., and where the general business requirements of the institution are attended to.

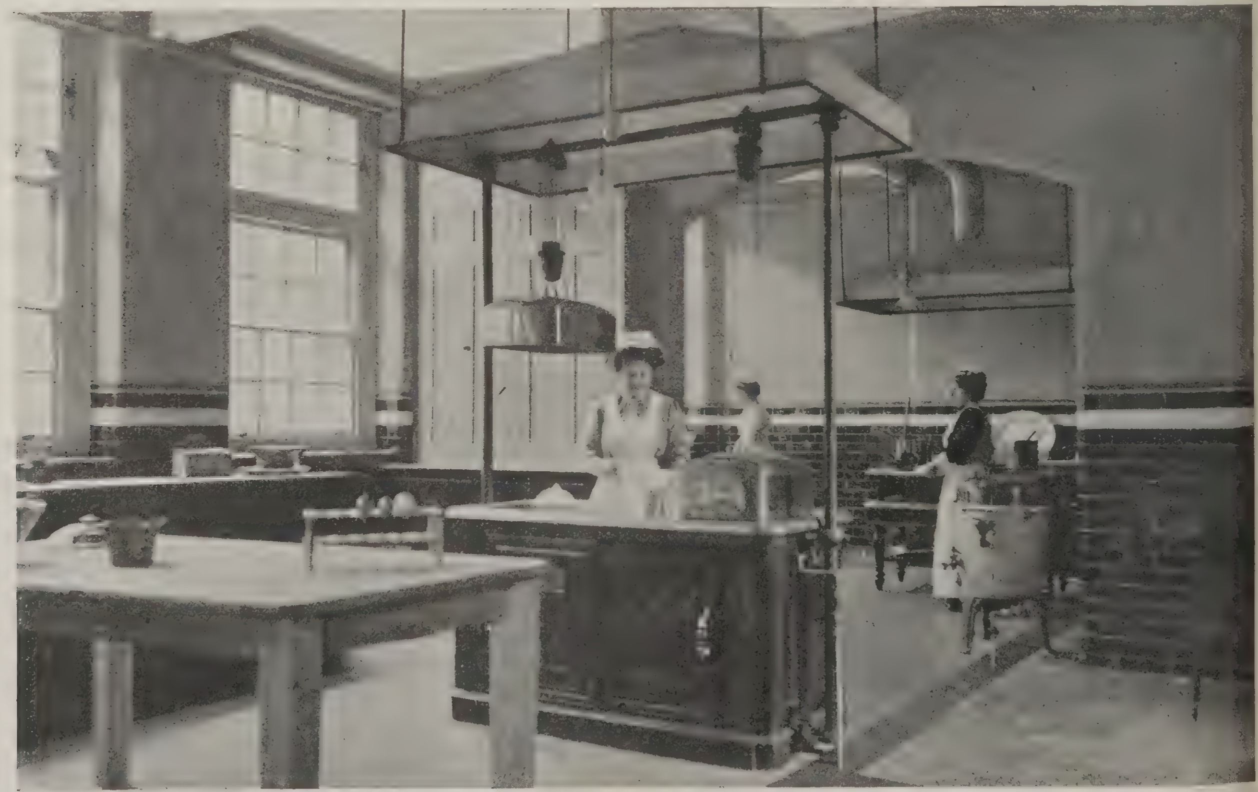
The kitchen, scullery, larders, meat store, etc., are adjacent to the service entrance. The former is a model of equipment in cooking for a considerable number, gas being used. The kitchen, scullery, and servery are connected not by doorways, but by archways; the work can proceed smoothly and without confusion. A food lift commences in the servery and communicates with each floor. The committee room is on this floor also.



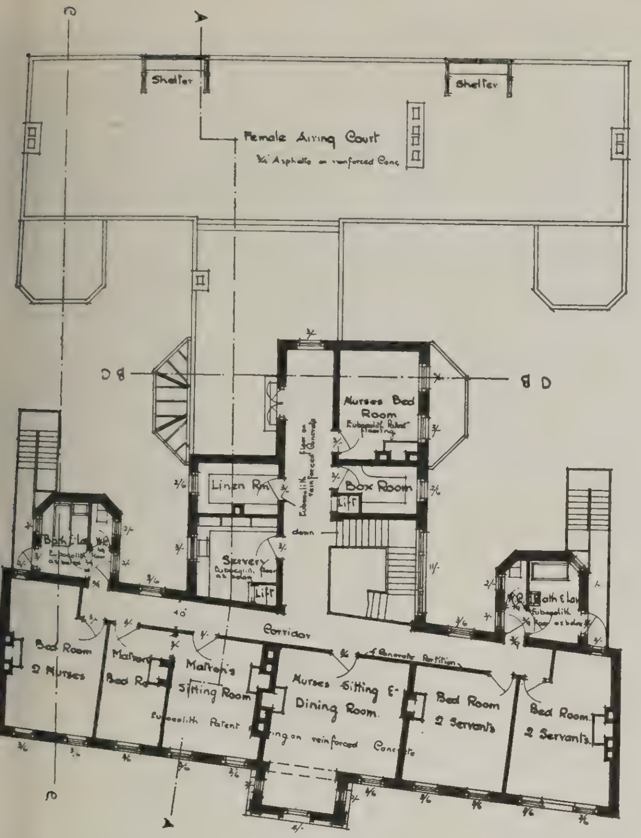
OPERATING ROOM.

The whole of the Ropewalk level is taken up by t
in-patients and casualty departments. It is divided i
male and female sections, each having two wards,
eight and six beds respectively.

The main entrance opens into a wainscoted h
which is fitted with seats and with the requirements
a small casualty room, for here minor accidents to t
eye are attended to. The two female wards open
of this. These are lofty, airy, well-ventilated apa
ments, and are capable of being sectionally darker
by a system of blinds and shutters, features to wh
very careful consideration has been given. The colo



NOTTINGHAM AND MIDLAND EYE INFIRMARY: KITCHEN. ARTHUR MARSHALL, A.R.I.B.A., ARCHITECT.



IRST FLOOR PLAN

SCALE 10 5 0 10 20 30 40 50 OF FEET

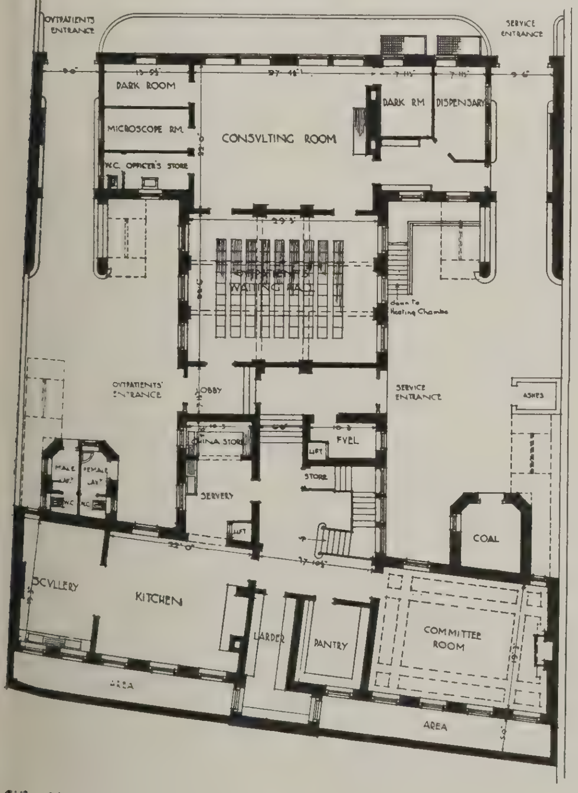
of the wards and the glass, which is green, is such will prove most restful and quiet to the eyes. A ntral corridor leads direct to the male wards, and dway between, on the north side, are the operating, sterilising, and clinical rooms. The walls, floor, and ceiling of the former are black. The whole question of lighting the patients undergoing an operation has been most carefully considered.

The day rooms are designed to be utilised as open-air balconies. By a system of patent sliding windows the whole room can in a few seconds be converted into a sun balcony. Each ward is fitted with a glow light for night use on a new system, by means of which one switch only is used for giving a light of varying degrees of strength, from the faintest glow to the full strength, a most useful feature in a hospital ward. The roofs, which are flat and covered with Val de Travers asphalt, are utilised as airing courts for males and females, and shelters are provided for each.

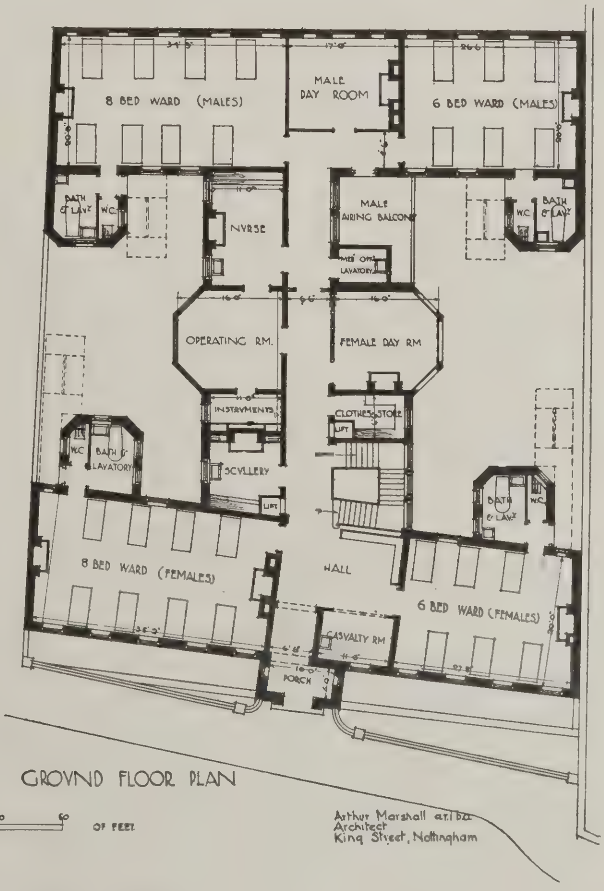
The first (staff) floor is so constructed that in the event of an extension of accommodation being required, an additional storey may be built without interfering in the least with the working of the institution. The entire structure is fireproof, the floors and roofs all being of reinforced concrete. The floor surfaces are of such material as are durable, non-absorbent, and easily cleaned, and there are no corners in the building which are not rounded. Each ward has its own sanitary annexe and fire-escape staircase.

All soil pipes are lined with glass, and all drains are in cast iron, with porcelain lining. No earthenware pipes are used. There are inspection chambers at every intersection and at every bend. A boiler in the basement supplies 176 gallons of water per hour at 160 deg. Fahrenheit. The building is heated by low-pressure hot water, with radiators of a special hospital pattern devised by the architect and made by the Beeston Foundry Co.

The cost of the structure, including furnishing, will be about £12,000. Messrs. T. Barlow and Co. are the builders. The heating is by Messrs. T. Danks and Co., the painting and decorating by Messrs. M. Marshall and Son, the cooking plant by Messrs. Ashwell and Nesbit, and the sanitary work and hot and cold water supply throughout are by Messrs. Humphrey and Co.



SUB-GROUND FLOOR PLAN.



GROUND FLOOR PLAN

SCALE 10 5 0 10 20 30 40 50 OF FEET

NOTTINGHAM AND MIDLAND EYE INFIRMARY. ARTHUR MARSHALL, A.R.I.B.A., ARCHITECT.

HEATING ARRANGEMENTS.—II.

[*Specially Contributed.*]

LAST week I gave a brief description of the various heating systems that are commonly in use. Having selected one, it still remains for the architect to specify some further matters; and as I am not going to suggest that he ought to work out the sizes and runs of pipes and the fuel consumption, nor in other ways constitute himself engineer, it will be understood that I am writing from the architectural point of view.

Radiators Required.

The number and surface of radiators or pipes required is naturally dependent on the system employed, the temperature desired, the amount of ventilation, and the character and construction of the building. With the high temperature obtained in a high-pressure hot-water or ordinary steam system, the radiating surface required for a given effect is naturally less than for a low-pressure water or reduced-pressure steam service. In ordinary buildings the plant should be capable of maintaining a temperature in winter of 30 deg. F. above the outside air, giving 62 deg. F. with the thermometer at the freezing point. If fires can be relied upon to assist in the few weeks of cold weather experienced in this country, this range may be considerably reduced. Assuming the average temperature of about 60 deg. F. in winter to be maintained by the plant, the number of cubic feet of space which can be "handled" by one square foot of radiating surface at about 150 deg. F., *i.e.*, in a low-pressure system, has been variously estimated between 50 and 100 cubic feet in various circumstances and by various writers. Perhaps 80 cubic feet may be taken as a fairly conservative all-round figure for an ordinary brick building devoid of any special system of ventilation or excessive glass areas; and if a temperature of 50 deg. F. is sufficient in corridors, this average would cover a fair number of fresh-air inlet radiators, which require 25 per cent. more surface than the ordinary type. Plans and sufficient sections must naturally be given to the heating engineers that they may lay out a scheme properly, but the detail of such initial information may be much reduced if the architect can state roughly the radiating surface demanded, and the estimation of the total cube inside external walls and between the lowest floor and highest ceiling (neglecting internal divisions), which is quite sufficient for competitive purposes, is not a matter involving much labour and does form a very valuable guide and check on the scheme proposed.

Boiler Power.

Apart from the desirability of specifying the sizes and make of boiler to prevent the inclusion in a tender of one too small to do its work without extravagant firing and thus undue depreciation, it is often necessary to form an idea quite early in designing as to the space wanted for this source of heat energy. Most modern boilers are now listed in B.T.U.'s (British thermal units), this unit being the amount of heat given out by 1 lb. of water in cooling 1 deg. F. Now, one square foot of radiator under the temperature conditions above described will emit each hour about 130 such units, and if this square foot heats 80 cubic feet of space, one cubic foot will require 130/80, or, roughly, $1\frac{1}{2}$ units, and since this is lost to the air it must be supplied by the boiler. It is true that the boiler power requisite is in some measure governed by the proposed "run," that is, the stoking intervals intended, but the rough rule evolved, namely, that the B.T.U.'s listed for the boiler should be one and a half times the cubic feet in the building, will be found useful as giving a ready connection between these factors. This relation may be employed generally for both water and steam systems, since although, of course, one square foot of a steam-fed radiator at its higher temperature will handle much more than 80 cubic feet of space, it will emit a proportionately greater number of thermal units.

Details of Equipment.

It is not advisable for the average architect to plunge too deeply into the technicalities of engineers' work involved in laying out a heating system, as should he carry this too far his misplaced effort at conscientiousness may be the cause of depriving him of that hold over the engineer which he ought to retain. There are, however, certain things which considerably affect the cost of the work and its general character, and those obviously he should decide.

Kind of Radiator.—Radiators may be (1) ordinary cast-iron pattern standing on feet, (2) F.A.I. radiators, either with separate wall inlet or boxed in below with special inlet through the floor, (3) low radiators for low windows, (4) hung on walls with iron brackets built in, (5) hinged radiators to swing out for cleaning, (6) special types, *e.g.*, copper or curved for bays, etc. It should also be made clear whether each radiator or run of pipes acting as such is to have a separate valve, as this is not always essential and may admit of a small saving. Air cocks should also be specified for systems requiring them.

Pipes.—Pipes are usually of wrought iron or cast iron; the former pipes are made in steam quality; blue water quality; black gas pipe. The first is usually galvanised, which is not necessary if painting is proposed. Steam pipe is quite appreciably more costly than ordinary "blue" pipe, which is perfectly serviceable for low-pressure work. Although the cast iron pipes are inferior to those of wrought iron, where large mains are in question the saving by their use is considerable, as W.I. pipes over 3 in. are costly and involve much expense in jointing and fittings. Where economy is important, and questions of space and appearance render this possible, the use of C.I. pipes down to 2 in. diameter will effect a further saving. Of course, such pipes have to be broken if repairs render their disjointing necessary, but this very seldom happens if the initial work is well done. The use of round elbows for bends should be insisted on, as these are better made than the square pattern and offer much less resistance to flow. In this connection the term "malleable iron" may be referred to, as it is often much abused. Strictly, "malleable iron" is wrought iron, *i.e*, forgible iron, which is the best material for ordinary work, but the expression is often used nowadays as referring to cast iron, which has by subsequent treatment been rendered partially malleable. If malleable iron fittings are specified or tendered for, the latter will usually be supplied. It is, therefore, wise to make the distinctio clear by referring to the one kind a "wrought iron" fittings, and to the othe as "malleable cast iron." When pipes ru through walls or floors, sleeve pieces— pieces of iron pipe large enough to form casing—should be specified. This admit of expansion and prevents damage in th event of repairs. Holderbats fixed o walls should have hinged fronts to enabl pipes to be taken down without damage.

When water is arranged to be draw from a heating system for domestic purposes—a very undesirable practice in th writer's opinion—the nature of the wate must be considered. With a hard wate furring of pipes will merely occur mor rapidly, but with a soft water, such as no supplied to several important towns i north-west England, the use of iron pipe would prove impossible owing to consta rusting. The alternative, copper, is, c course, a grave matter as regards increase cost, even in a very small system.

Lagging.

"My architect put me to tremendous expense; after he had finished I had to hav the whole boiler and mains lagged," wa the recent comment of a friend. It is indeed curious how often this matter omitted or expected to be included in tender without any mention in the requirements. Speaking generally, a boiler an its flue pipe should always be lagge which is generally effected by asbest plaster, and should receive two coats white paint and one of varnish. Blac varnish is generally used, as this may prepared from very inferior materials, b as black is the best radiator known it is th least suitable finish. All flange and oth bolts should be left exposed so as to readily accessible. Such lagging not onl makes many small stoke-holes alone bea able, and thus encourages care and attention to the plant, but the saving in fuel pays the capital cost in a very short perio The lagging should be specified to be la in three coats, with wire netting interve ing, and should generally be 2 in. thick the boiler and $1\frac{1}{2}$ in. thick on mains. F smaller cased pipes hair felt is often sui able, and slag wool is an excellent no conductor, but has a tendency to turn powder.

Whether mains should be lagg depends upon circumstances. If they a not required to contribute to the heating direct warming of the air and are expose —more particularly if to currents of co air—this should certainly be done. But the mains are in closed trenches in still d air, the expense of lagging may be w saved, since than dry air there is no bett non-conductor.

With all lagging it should be remembered that any increase in the diameter the pipe vastly increases the surface ar for radiation; hence, if the material is n efficient as a non-conductor, it may act ally prove to be worse than nothing at a We have not reached the stage of posses ing a commercial standard of non-condu tance for lagging materials by which can specify, but it seems desirable th such should be agreed upon.

Expansion Tank and Safety Valve.

In an open system an expansion tan and in a closed system a safety valve, a of course, necessary, and a safety val may be desirable even with an open s

em, if stoppage, as by freezing, is to be
uarded against. The approximate posi-
ion of the tank should be indicated to
ssist the engineers in arranging their
cheme and its protection, and overflow
nd supply be included (the last item gen-
rally among builders' work).

Painting.

This is a constant source of friction at
he completion of a contract, and if the
ngineers are to do this their duties should
e clearly stated. Radiators are usually
ent out with a coat of grey priming on
iem as a mere preservative against rust,
hich is often called "painting" in com-
etitive work. Since the final tint is often
ecided on some time after the heating
ork is finished, it is possibly best to re-
uire only the grey priming and one fur-
ier coat and to leave the rest to the
eneral contractor.

Completion.

As stated above, it often happens that
ie engineers finish their work in advance
f the decorators, and then the system
iust be emptied and radiators often taken
own and refixed. It is therefore well to
equire that this labour be included, or at
east priced as a provision. Finally, in-
tructions to the attendant, testing, and
uration of liability will require mention.

Builders' Work.

It is often very difficult for an architect's
urveyor to foresee all the building work
nd attendance which a heating installa-
on will involve. Some matters are ob-
ious and should be decided upon during
ie design of the building, such as the
eating chamber with its drainage and
ater supply, fuel storage, and perhaps a
ump room, chimney stack suitable for
ie boiler power, trenches and (assuming
iat these will not have the undesirable
pen gratings) the nature of their covers
ontaining lifting eyes or rings, in relation
the floor surfaces, the number, size, ren-
ering and gratings of fresh-air inlets.

Holes through walls and floors can only
eally be determined by the engineers
iemselves, but should be, of course, pro-
ided for in the builders' work. A good
ractice in straightforward work, fully
lustrated by plans and sections, is to
blige the engineers when submitting a
ender to supply a schedule of all the
uilders' work required, and to state that
the absence of authorised variations they
ill be charged with any further work
hich they subsequently want. Fixing is
matter which seems to gravitate into a
ontentious atmosphere, and the engineers
iould include in the schedule of builders'
ork the number of cuttings and makings-
ood required for brackets and holderbats,
nd the builder be warned that he does
urther work as between himself and the
ngineers. Since to cut away for and to
iake good after any fixture practically
ieans that the builder fixes it; possibly it
best to say initially that the builder will
o such fixing under the engineer's direc-
on. As to painting, not only the number
f coats, but the kind of paint to be ap-
lied, requires special consideration.

A final word. It often happens—at least
the writer—that in dealing on these
nes with this and other specialist work, a
rm will point out some very material im-
rovement by an alteration in the condi-
ons imposed. In such a case the inva-
iable reply received is: "Tender on the
ommon basis given even if you do not
gree with it. If you obtain the work,
ring your priced schedule, and your sug-
ested improvement will then be very cor-
ially received and considered."

COTTAGE HOUSING:

ITS ECONOMIC LIMITATIONS AND DISTINCTIVE CHARACTER.

Lecturing on this topic at the Carpenters' Hall on March 11, Mr. Maurice B. Adams said that the programme indicated by the title for that evening's subject was sufficiently comprehensive and complex without digressing into the provisions of town planning or intruding into details of industrial urban dwellings. It was impossible, however, to exclude its political aspects, owing to recent as well as contemplated legislation, so forcibly foreshadowed by the Government, as to land tenure, including housings for labour. No good would be done by mincing words over the matter. In so far as can reasonably be anticipated, the public would be allowed no choice, nor individuals afforded any chance of deciding for themselves. These model cottages might be run up like mushrooms from lithographed plans issued by the thousand, with outline specifications, and possibly draft quantities billed out, as part of a big departmental housing scheme promulgated under some high-sounding, ingeniously worded title invented by a central caucus, to be boomed as a promissory note on the millennium. When, however, we examined this desperate remedy, it was obvious that any such stereotyped standard buildings, made to meet averages, could not comprehend varied contingencies, or accord with differing local requirements. At best they must be ill-adapted to special sites and surroundings, besides failing to recognise the little that still remains of vernacular tradition in the remoter parts of the land. But what was even more important still was the incorrigible ineptitude of all such standard repetitions, inasmuch as they inevitably ignored the natural use of indigenous materials peculiar to geographical districts where houses of all sorts also ought to be adapted to climatic requirements.

Continuing his indictment of "this reckless and irrevocable project for disfiguring wholesale the charm of British landscape," Mr. Adams said that the principle enunciated by the apologists for the lowest possible minimum in rural as well as agricultural housing provision was either that "half a loaf is better than none," or that the occupier on his part must remain content with "a sufficient cottage"—meaning in plain English "short quarters"—and, on the other part, that the landlord, he being a private owner, must be content with some shortage by way of return upon his capital outlay. Thus the physical and economic conditions of supply and demand were not recognised on their merits, and this was not the way to deal with this problem with any chance of success.

Herein lay the crux of the whole question. Cheap money was essential, and inexpensive sites a prime consideration. In rural districts the land was cheap enough, and many landowners, to meet the difficulty, were prepared to practically provide sites for a song, and at prices which only adds a penny-halfpenny on the rent. Already some had offered to give the land outright. Mr. John Burns had told them that there was generally no difficulty in acquiring suitable land, and that the compulsory powers given by the Act of 1909 had only been invoked in three cases. Local authorities up to December, 1913, had erected 7,713 houses with £1,400,000 on loans sanctioned by the Local Government Board. These bodies could obtain money from the Government on the full amount of the value of such property for sixty years at 4½ per cent., including the repayment of the principal; but private individuals were unable to obtain advances at anything like such advantageous terms, because they had to pay for interest alone from £4 per cent. to £5 per cent., after having already had to find at least one-third of the capital cost to begin building. The usual terms for the repayment of the principal was thirty years at something like £5½ per cent. In this way the local authority was given a preference in regard to annual charges, and had to provide no capital outlay at all. Meanwhile, the cottages thus erected were being automatically acquired for the local authority; but the tenants, who really paid for the buildings, could never own them, and should the rent not be forthcoming, the local authority was precluded from exercising any clemency, and must forthwith evict without parley in default.

Referring to the small holdings scheme as a method of getting a man back to the land, the lecturer said that this had hardly realised expectations. There was no consistency in the way in which this attempt was carried out.

The President of the Board of Agriculture, dealing with Crown land, during 1912 converted 973 acres into small holdings, but he increased the rent-roll by £369, which has to be paid annually by struggling occupiers, without a chance of their acquiring the holdings. Belgian towns had taken the lead in deporting their working populations into the country to the extent of 25 to 30 per cent., and in the working of dairy farms and management of small allotments Denmark had much to teach us; but we need not go so far as the Netherlands to learn some initial lessons, because the enormous success of the Wyndham Act in Ireland was full of instruction. This success is due, first of all, to the facilities attorded to the tenants by accommodating them with money at a low rate of interest to enable them to ultimately become the freeholders.

In sparsely populated agricultural localities, cottages should not be so isolated as often happened in the past, although no doubt the farm labourer does still need to be located near his work. Children's education had to be thought of, and much misery was caused in times of sickness by being beyond the reach of a helping hand. Groups of cottages, therefore, were preferable and also less expensive to carry out than single ones. Combined water supply and drainage cost so much less than individual installations. Successful cottage-work must depend on simple ideas, avoiding any attempt at architecture in the ordinarily understood sense of the word—that is to say, cottages must be free of all affectation of style. Pleasing proportions and nice groupings unassumingly managed, constituted the sum-total, all told, for good results.

The value of scale in colour must be recognised in any well-thought-out design. Red brick was apt to look crude or too assertive; so, if a choice is possible, darker or brindled shades and thin shapes were preferable. Purple slates were out of place with red brick in a clay district where tiles were made. Slates went better with masonry, and red pantiles, though cheap, were too big in scale for little structures. Flint facing with red-brick or tile dressings, in Sussex fashion, want a lot of beating, provided a cream-coloured mortar was used. Snap flintwork, as used in Norfolk and Suffolk with stone, was too expensive for cottages. When random masonry was employed with wide, uneven joints, the walling was much increased in interest by garnetting with pebbles or little pieces of black ironstone stuck into the mortar. He had used salt-glazed bricks with good effect for house-walls facing the sea and actually built on the shingle shore. For walls under bay-windows, salt-glazed brick was also valuable, keeping out the damp, so often a source of trouble in such positions, owing to the water running down from much glass surface. Grey stocks looked nice for cottages, but the size of Midland and North-country bricks made them difficult to use unplastered. Cob cottages roofed with thatch nearly always looked delightful; they were warm in winter and cool in summer, and lasted a long time. Unbroken roof lines were of the utmost consequence in buildings of this class, while horizontal proportions were so essential that not even breadth of walling—always so valuable—could claim a prior place for ensuring success. Pargetted cottages were met with chiefly in the Eastern Counties, where they were built with studs and lathed with split unbarked hazel, used when green and pliant. The panels were pricked-up with coarse plaster mixed with chopped straw or hay mingled with pebbles and finished off with fine stuff. This style of building had a remote origin in the mud-and-wattle work of our Saxon ancestors, and it was very durable. Pargetted walls often had rounded angles, such as befit the material, and were frequently whitewashed or roughcasted. Whitewashed brickwork was recommended for inexpensive work, but a spotty look resulted from soft and dark bricks grinning through, and though the lime might help to keep out the wet it was not satisfactory. The question of cost necessarily had to be faced, and occasional disputes arose, but a large proportion of these financial troubles were due to misconceptions resulting from an absence of judgment and forethought.

The outstanding drawback about so-called "standard cottages" for labourers in country places was their inadequate size, giving no room "to swing a cat"; and yet healthy men and growing boys, working from morning till night in the open fields, developing their muscles like cart-horses', were to be cramped up, with scarcely more than a gangway between the table and the hearth to turn in, or stretch out their tired limbs when the day's task was over. After being exposed to the wind and weather from sunrise till sunset, such people rather enjoyed a stuffy atmosphere at night-time, when they like to feel warm: hence their disinclination to open the windows. But that is no reason why their keeping-room fire should be set in a draught between the front and back doors. As a matter of fact, one door is, generally speaking, sufficient for a house of this sort. It was a mistake to provide parlours. But a small separate room in which to see visitors and for personal business was desirable. Staircases in the better type of cottage should be located out of sight of the front entrance, to preclude too ready a survey of the interior, and all stairways must be ample enough to pass coffins and wardrobes. Bathrooms and lavatories were best placed away from the main fronts, so as to keep wastepipes out of hearing and sight. Vitrified glazed baths were to be preferred, but earthenware baths were not adapted to domestic use or small dwellings, as they cracked if hot water was suddenly turned on. It would be tiresome to extend this list, but the hot-water system of cottages could not be overlooked.

One word in conclusion about drainage, which could not be too simple for industrial tenants, who usually had very elementary ideas about such matters, and they neglected earth-closets shockingly. Waste water and slops were best thrown on the garden, but the bucket was seldom left in its proper position outside the scullery wall. A soakage pit, in light soils, made the simplest arrangement. Combined drainage was allowable for cottage property in some rural districts, and cesspits were often unavoidable; but where a sufficient fall was available, semi-septic purifiers and filtering beds furnished a most efficient method of dealing with the soil. Only, in such cases, do not allow chemicals or carbolic acid to get into the drains, or the disintegrating process would at once be sterilised and stop the aerobic efficiency of the scheme, causing a fearful nuisance. Brick-built junction chambers, with airtight covers at every branch connection, added greatly to the cost of drains and occasionally caused accumulations of filth. To obviate such objections and expense, the "Rodding eye" system had been carried out successfully on an extensive scale at Letchworth by Mr. Donnelly, and the local authority had also taken it up for their properties. The point about this method was facility of access, all else as to ventilation being similar to all up-to-date plans of drainage.

In conclusion, Mr. Adams said that the Council of the Associated Chambers of Agriculture last month came to the conclusion that a standard cottage of cheap construction, "without sacrifice of efficiency," at 3s. 6d. a week, was the lowest economic rent conceivable. The annual rental was thus £6 10s., and from this deductions of £1 for repairs, 2s. 6d. for insurance, left a balance which, if capitalised at 3¾ per cent., would represent £143 6s. 8d. This would provide £5 for the site purchase, £10 for water supply, and £5 for fencing, paths, etc., and leave £123 6s. 8d. for the building. Evidence was given that three bedrooms, a living room, and scullery had been built for that money. Mr. Walter Runciman, speaking on behalf of the Government, promised if money was wanted for such rural housing it would be forthcoming from the national purse. More recently still, the Chancellor of the Exchequer, on the eve of a by-election, promised, in the House of Commons, that the Government would arrange to what extent public credit should be hypothecated, and what would be the financial grant necessary "to deal with this tremendous problem."

THE ARCHITECTURAL CHARMS OF CAEN.

Mr. Arthur Harrison, B.A., gave a delightful address on the architectural features of Caen at a meeting of the Birmingham Architectural Association on Friday. Caen was the place visited by the Association on the occasion of the last excursion, and the address had been anticipated with keen interest by the members, of whom there was an exceptionally large attendance. The President (Mr. G. Salway Nicol) presided.

Mr. Harrison remarked that two churches in Caen, St. Jean and St. Sauveur, lying somewhat in the backwater of public interest, had passed the nineteenth century almost unscathed. St. Jean rejoiced in two remarkable towers. The central one had a top story which, to judge by its pinnacles, was to have been a triumph of the François I. style, but it stopped as suddenly as the Tower of Babel, and its unfinished windows stuck up like exaggerated battlements. The western one was a real leaning tower; its inclination was not quite eight feet, rather less than half that of Pisa; but this peculiarity must not cause them to overlook its other qualities. Indeed, the whole church was picturesque, and there was a noticeable corner at the back entrance behind the choir. St. Sauveur used to be called Notre-Dame de Froide Rue—a quaint title that well suited its character. The east end, which, like the spire, had some points of resemblance with St. Pierre, was on the Rue St. Pierre, but it was in the old Rue Froide that the spirit of the place came upon them. The church rubbed shoulders with the street in a familiar, homely way that took them straight back to the Middle Ages—to the time when religion and common life were more closely intermingled, when men made beautiful things without thinking it necessary to rail them in, and without self-consciousness. A spiral staircase, for instance, was let into the wall so quietly, so charmingly. The man who made it did not think about fine-art societies or the critics or the Legion of Honour, and probably did not know he was creating a chef-d'œuvre. He just wanted to make a way by which the gallery could be reached, and he made it this way because it gave him joy to use his wits. The internal gallery had gone now, and whether it was for relics or for a private pew they did not know, but the staircase remained. If asked what was the special architectural distinction of Caen he thought one would have to put aside all its fine churches and point to the Renaissance hotels, which were named la Monnaie Moindrainville, Escoville and Than, for they were altogether *sui generis*. Like the kindred mansions of Fontaine-Henr and Lasson, which the party saw on the road, they were the work of those artists o the François Premier period who determined to produce houses of an entirely new character. The Hotel d'Escoville (now used as the Bourse) was the most imposing of the Renaissance palaces, though the façade opposite St. Pierre was defaced by the ensigns which modern shopkeeper seemed to consider necessary to the success of their businesses, and the interio quadrangle was undergoing restoration It was built in 1537. Entering the courtyard, they had the most interesting part o the hotel before them. Out of the roo rose a huge dormer window, which M Palustre characterised as "la plus grande et la plus magnifique lucarne qui soi jamais sorti de l'imagination d'un artiste. At one corner the principal entrance led to a winding staircase, of which the step were worn so thin that one seemed to b walking on the clouds. Two handsom cupolas crowned the staircase. On th right wing statues were set between th windows, the oddly chosen subjects bein the two great beheaders—David holdin the head of Goliath, and Judith that o Holofernes. They were excellently carved and so were the minor sculptures of Andromeda and Europa. The Hotel de Tha was another product of the age of François I. Its windows had those intersectin mouldings that one noticed in a goo many Caen houses, and climbing in an out of the weather mouldings were all manner of creatures, such as a snail, a lion and a dog biting a bone in a very dog-lik fashion. The medallions were noticeabl so were the gables. The latter were lik Paisley ware, and might have bee modelled on it. Caen abounded also i ss important houses, and in courtyards, hich they would miss if they hesitated to xplore those tunnels that one saw every- here among the houses. But, in truth, e best charms of a town could not be cketed. Mr. Harrison, in conclusion, oke of Lisieux, which possesses many re- arkably fine examples of old timber ouses of the fourteenth and sixteenth cen- ries; and of Bayeux, which, he said, is omelier than most French towns, and has ore gardens and trees, and the air of eing entirely old.

At the close a hearty vote of thanks was corded Mr. Harrison. on the proposition the President, seconded by Mr. Charles . Bateman.

Mr. Harrison exhibited some of his fine ater-colour drawings of various interest- g spots on the excursion, and these were spected with the keenest interest and easure. Some remarkably clever pencil etches by Mr. Holland W. Hobbiss and e President also aroused much admira- on.

ROMANESQUE ARCHITECTURE.

At an ordinary meeting of the Architec- ral Association of Ireland, held on Feb- ary 26, at 15 South Frederick Lane, the resident, Professor W. A. Scott, .R.I.B.A., occupying the chair, Mr. P. Lynch, M.R.I.A., read a paper on "The istory of the Romanesque Style of rchitecture." He said that the Roman- sque style was associated with some of e best traditions of native art. Church uilders were now turning their attention this style, which undoubtedly possessed great wealth of beauty, both in orna- ent and outline. In tracing its history e referred to the death of Classic Art in aly in the fourth century, and the efforts ade to revive it in Ravenna, the last pital of the Western Empire. When terwards this art of Ravenna became ominated by Byzantine influences, the nion gave birth to early Lombardic, hich may be said to have been the parent the Romanesque. Giving a short his- ry of the guild of craftsmen known as e "Comacine Masters," the lecturer ated that the theory that they were e founders of Freemasonry is ow discredited, and the statement at they were protected in foreign ountries by Papal bulls needs con- rmation. In dealing with France the atures peculiar to Provence, Aquitaine, ormandy, etc., were explained. The hurch was the moving spirit, and the onks were frequently the architects in ose days. There was a long connection etween Ireland and Aquitaine, and a re- nt writer, Rivoira, showed that the pre- nce of a band of monks from "the land the Scoti" (Ireland), who were estab- shed in Poitou in the seventh century, ould explain the introduction of a strik- g feature in the architecture of Poitou to early Irish and Anglo-Saxon architec- re. German Romanesque had an in- resting history. The plan of the onastery of St. Gall (who was an Irish- an) in the ninth century, with its double psidal terminations and two flanking ound towers, had much to do with form- g the German style. At that time the rincipal monasteries on the Rhine and her parts of Germany were ruled by Irish bbots, who would, naturally, follow St. all, which, as Zimmer states, was then -owing to its Irish monks—the great ntre of culture in Europe. In England, t Durham, Tewkesbury, and other laces, we found some of the best specimens of the late Romanesque in Europe; but the history of the early style, or Anglo-Saxon was more interesting as it was only in the latter part of the last century it was restored to a place in architecture.

Romanesque in Ireland.

Mr. Lynch hoped that the admission of a pre-Norman style in England might lead to a similar result in Ireland. He explained that the difficulty of dealing with the history of Irish Romanesque was that those who disparage our early architecture rely on the incident related in the life of St. Malachy (who died 1148 A.D.), that when the saint commenced building a stone church at Bangor the people expressed wonder at his extravagance, this, as the life states, being the first stone church in Ireland. Yet we read in the Annals: "A.D. 1065 Donnchadh ua Mathghamhna, King of Ulidia was killed by the Ulidians themselves in the Daimhlaig (stone church) of Beannchair," so that 100 years before St. Malachy's time there was, even in Bangor, a stone church, and such are mentioned in the Annals from the eighth century. Most writers on this subject did not realise the pre-eminence of Ireland in science and art up to the eleventh century. A late writer, Mr. Champneys, ascribed all our ornamental architecture to Norman influence. Rivoira, who had been to Ireland, states that the cross of Muireadhach could not be of the tenth century, as from his observation he felt sure there was no artist in Europe up to the close of the eleventh century capable of producing such a fine work, and he assigned it to the last half of the twelfth century. As archæologists were agreed as to the date of this cross, Rivoira's statement meant that Irish sculptors were over a century ahead of the artists of Europe at the end of the tenth century.

Cashel.

Cormac's Chapel at Cashel, a fine specimen of Romanesque, in the lecturer's opinion, also required investigation. There was evidence that it had been altered, and a portion of Cormac MacCullinan's church might be incorporated with it. That there was a large Romanesque church at Cashel in the twelfth century appeared from Dr. Wattenbach's history of the great Irish monastery at Ratisbon, as when its Abbot, Christian McCarthy, who was in Ireland collecting money for his monastery, died at Cashel, about 1150 A.D., he was buried before the altar of St. Patrick in the Cathedral of Cashel. This was before the foundation of the present Gothic Cathedral.

Many lantern slides of early Roman esque carving in Ireland were shown, and the lecturer appealed for some protection for such interesting ruins, and also hoped that the School of Architecture at the National University would organise some scientific research into the history of Irish Romanesque.

Condition of the Forth Bridge.

After nearly twenty-four years of service the Forth Bridge has begun to show signs of wear; and operations, which will gradually assume a more extensive scale, have been started by Messrs. Arrol and Co. with the object of strengthening the structure. Since the time when the bridge was opened not only has the traffic greatly increased but the lomomotives have risen in weight from eighty to about 130 tons. Experts have estimated that, provided it receives adequate attention, the Forth Bridge should endure for at least five hundred years.

ARCHITECTURE AND ENVIRONMENT.*

BY W. S. PURCHON, F.R.I.B.A., LECTURER IN ARCHITECTURE AT SHEFFIELD UNIVERSITY.

The author had chosen this subject for his paper partly because of the current interest in the projects for the new Delhi, partly because of the changes observable in the English architecture of to-day, and partly because of certain recent developments in architectural education.

The main point with which he was going to deal was the proposition that for a building to be fully beautiful, for it to be architecture in the best sense of the word, it must be suitable to its environment. A certain form, for example, might have a kind of beauty in itself, but its fullest beauty could only be seen when it was in its proper place. It was very true of architecture, he thought, that what was beautiful in one set of surroundings was not necessarily so in another. While the arrangement of the buildings with regard to the nature of the site was a matter of considerable importance, what was perhaps the principal point to be considered was the suitability of a building to the climate of the neighbourhood in which it was erected.

Showing on a slide the mean annual general distribution of rain, the lecturer observed that Egypt has a very low rainfall; Greece, Italy, and France have more, while it must be remembered that in North France and in England snow is a factor with which the architect has to deal. The hot and dry climate of Egypt allowed the ancient Egyptian to erect a comparatively simple type of building, for, while protection against heat was necessary, it was not so necessary to protect the building from wet weather, which is a rather more difficult task. Hence the remains of ancient Egyptian temples showed flat roofs, comparatively small openings arranged to give light, and a large amount of delicate carving painted in vivid colours. In all these matters Egyptian architecture was in harmony with its environment. The climate of Greece was less dry than that of Egypt, so here we found, as might be expected, slightly sloping roofs, not used to give a pleasing proportion to the pediment, but as a matter of sound building. Climate encouraged in the Greeks of the great period of architecture a love of open-air life; the theatres were out in the open, and many of the religious ceremonies were performed out of doors; and these factors naturally had their effect on the architecture. In Egypt the interior of the temple was all-important. In Greece, while the interior was by no means neglected, the treatment of the exterior received far more attention than in Egypt. It was beautified by the addition of the peristyle, which was of great value as a protection from sun and rain, and which in a hot climate keeps the building behind cool; it was also enriched by the wonderfully beautiful figure sculpture in the pediments and friezes. A slightly sloping roof was found necessary in the great Greek buildings because of the rainfall, and the sculpture was usually carefully protected from the rain. The sculptures of the main frieze in the Parthenon were under the ceiling of the peristyle, while those in the frieze of the external order and in the pediment had great projecting cornices over them. These cornices were, of course, so designed that the rain would drop off well in front of the sculpture. This type of cornice could not, in fact, have been thought of but for the nature of the environment. And, while provision had to be made for some rain in Greece, there was still plenty of bright sunshine, so that detail and ornament could be extremely delicate and refined.

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* Extracts from a paper read before the Architectural Association, on March 2.

With regard to the siting of Greek buildings, their designers made excellent use of fine natural sites, a good example being the Acropolis at Athens, another the Temple of Juno at Girghenti, and a third the wonderful site at Delphi.

In Italy climatic conditions were very similar to those of Greece, so that the modifications made by the Romans when they developed their architecture partly on Greek lines were not due to differences of climate. The Roman roof, for instance, is slightly steeper than the Greek one, but that is probably because the Romans, in developing the construction of timber roofs, found they could obtain increased strength by increasing the pitch. As in Greek work, great importance was attached to the appearance of the exteriors of Roman buildings, and, though the colonnades at the sides of the temples were frequently omitted, ample protection from sun and rain was provided in the increased covered space in front of the temple.

Roman colonnaded streets are also indications of the influence of the climate on the architecture of the time. In the Roman house climatic influence also shows clearly; the atrium was open to the sky in the centre, but protected from sun and rain at the sides. Whereas the Greeks took advantage of beautiful sites, arranging their buildings harmoniously on them, the Romans were more famous for developing the arranging of buildings in fine symmetrical groups.

In the countries which the Romans conquered there was, generally speaking, no architectural style in existence, and in these countries the Romans erected the buildings they needed practically as they built at Rome. The temple at Nîmes, for instance, is one of the finest examples of a Roman rectangular temple in existence; and at Nîmes, too, is a fine amphitheatre. But in Egypt, where the Romans found a great architectural tradition, they practically left it alone to develop on its own lines. The Greek too, had made but little impression on Egyptian architecture.

In Greek work, columns were practically always fluted. Probably for reasons connected with the nature of the material, the Roman frequently left his columns unfluted, and the same practice was followed in Byzantine times—as, for instance, in the columns of Santa Sophia.

Mr. Purchon proceeded to consider the development of Romanesque and Gothic architecture, with special reference to the influence of climate. Gothic architecture developed in England and France, not because some designer thought he liked the shape of certain forms, but because, to a considerable extent, it was necessary that it should develop on certain lines in order to be effective in its particular environment. When, during the fourteenth century, enthusiasm for antique culture developed in Italy it was far easier for the Italian to go over to Rome than it was for the Frenchman or the Englishman. When, however, the Renaissance in architecture spread to England and France, it did not at first entirely upset the traditional methods of building, so that, for instance, we find in the early Renaissance châteaux of France the steep roof and the great chimney stack, and in England Inigo Jones's Coleshill retains these features. But gradually Italian forms were copied in France and England, not because they suited the climate, but because, being the work of the Italian masters, they were considered beautiful in themselves.

Many mistakes were made during the Renaissance period; convenience was sacrificed to outward show, and environment was often neglected. From these mistakes there was much that we could learn, much that could help us to keep English architecture on sound lines.

In the latter half of the eighteenth century a great deal of attention was paid to Greek culture and art in general, and to Greek architecture in particular, with the result that a revival of Greek architecture took place in this and other countries during the early part of the nineteenth century. In rather later days Cockerell tried to work on Greek lines, but endeavoured to make his buildings fit in better with modern requirements and local conditions.

With respect to Delhi, the author thought that the proper attitude to adopt was that the new buildings should be designed with the object of making them thoroughly efficient for the purposes for which they were required, and perfectly harmonious with their environment.

Criticising current methods of architectural education, Mr. Purchon thought that those entrusted with the setting of problems in design should pay more attention to environment and should give greater encouragement to the study of the more practical and fundamental factors of design.

In conclusion, he said that not only was the influence of environment on architecture of importance to us as architects, but we must also bear in mind that architecture was a part of the environment of the people, and a very important part too. The responsibility of architects was therefore a great one, for, while the influence of ugly and sordid buildings was degrading, and that of a sham, forced architecture was, at the best, ineffective and inoffensive, the influence of a genuine architecture on all who came into contact with it was uplifting and ennobling.

NORTHERN ARCHITECTURAL ASSOCIATION.

The annual meeting of the above association was held in Newcastle on Wednesday evening last, March 11th, when the chair was occupied by Mr. W. Milburn. The roll of the society, as given in the annual report, is as follows: Members, 89; Associates, 90; Students, 33. The following prizes were awarded: Measured drawings (age limit twenty-five years), Mr. George H. Gray; twenty-one years, Mr. William J. Reed. Architectural Sketches (age limit twenty-five years), Mr. H. St. John Harrison; twenty-one years, Mr. W. J. Reed. Glover Studentship: Mr. Harrison.

The hon. treasurer (Mr. J. T. Cackett) presented the financial statement, which showed a balance in hand of £49 3s.

The officers for the ensuing session are as follows: President, Mr. R. Burns Dick; vice-president, Mr. C. S. Errington; hon. treasurer, Mr. J. T. Cackett; hon. librarian, Mr. J. Bruce; hon. secretary, Mr. H. L. Hicks; hon. assistant-secretary, Mr. C. I. Greenhow.

BOOK NOTICES.

Indian Architecture.

What may be called autocratic criticism is everywhere giving place to the inductive method, which is distinctly less arbitrary and therefore more truly scientific. Your autocrat—like Fergusson or Rickman—possesses himself of certain fixed ideas, which he is pleased to call principles, but which are often no better than prejudices, and with this *apparatus criticus* tests all things, never doubting that it is equal to every occasion—that it is, in effect, the touchstone of truth. This is to attach too much importance to the mere machinery of judgment. Induction is more ductile, recognising, for example, that the "canons" commonly prescribed are not all universal, some of them being inadequate to whole ranges of experience that were considered insufficiently or not at all when the "canons" were formed. Art, in particular, is not amenable to absolute judgment by rule and rote; for the philosopher who set out on an expedition "in search of the Absolute" did not discover it, though he returned the larger-minded for his exploration into unfamiliar regions. There is, in fact, no absolute, no final criterion of judgment, and those who base their criticism on such a figment of convention are sooner or later discredited. Like the egregious Thomas Rymer, who demolished Shakespeare, or like Ruskin, who so easily disposed of Whistler, or like certain writers of to-day whom it would be invidious to name, your cocksure critic is sooner or later hit badly by his own boomerang, and is thereafter discredited more or less seriously as an "authority."

When Mr. E. B. Havell, in his preface to "Indian Architecture," refers to his endeavour "to lay down a sound critical basis" for the study of Indian art, he means, in effect, that he has adopted the inductive method. He has refused to cramp himself with the shackles that fettered Fergusson, because "the history of architecture is not, as Fergusson thought, the classification of buildings in archæological watertight compartments, according to arbitrary academic ideas of style, but a history of national life and thought. The first duty of an historian of Indian architecture is to realise for himself the distinctive qualities which constitute its Indianness, or its value in the synthesis of Indian life. Fergusson only read into Indian architecture the values he attached to it from his knowledge of Western archæology, and consequently the only result of his magnificent pioneer work has been to give the subject an honourable place in the Western architect's library among the books that are never read."

Mr. Havell, however, has an intimate acquaintance with his subject, derived from long residence in India, and close association with its art and its artists, he having founded and conducted, we believe, the Calcutta School of Fine Arts. To him, therefore, if to any Western mind, we may look with confidence for sympathetic understanding and true interpretation of Indian art and architecture.

At the outset the author deprecates the fixed idea obsessing European critics, "that true æsthetic feeling has always been wanting in the Hindu mind, and that everything really great in Indian art has been suggested or introduced by foreigners"—an attitude of mind that must inevitably lead to false conclusions. Mr. Havell holds that the Tâj Mahall and the great monuments of Bijâpûr are "more Indian than

t. Paul's Cathedral and Westminster
bbey are English.

Symbolism is of the essence of Indian
chitecture. The lotus, typifying divine
urity and beauty, is employed in an in-
nite variety of ways, and the combina-
on of the lotus flower, its well-shaped
uit, and the water-pot (which held " the
eative element, or the nectar of immor-
lity churned by gods and demons from
e cosmic ocean), forms the basis of the
esign of most Hindu temple pillars.
rabic and Saracenic architecture, pecu-
arly rich in the decoration of surfaces, is
fective in the sense of mass and propor-
on, and is structurally inferior to Indian
ork, which is distinguished by " beauty
architectural structure, scientific en-
neering, skilful planning, and perfect
asonic craftsmanship." It is believed
at in the eighth and ninth centuries of
e Christian era the Hindus were the
aster-builders of Asia, and probably of
e whole world.

As early as the middle of the fourteenth
ntury, the builders employed by the
ohammedans at Gaur were using the
inted arch constructively, and it is pro-
ble that Indian builders were using
diating arches, either round or pointed,
fore the Mohammedans came into the
untry. Through successive centuries
e author traces the complicated history
building in India, and shows by
asterly analysis the various influences of
ce, period, and political exigency, and he
s, indeed, produced an intensely in-
esting book, which, illustrated with a
alth of representative examples of
table buildings, details, and plans,
nders fully evident for the first time how
vast and how fascinating a field of architectural study had been hitherto neglected. By the pains and scholarship devoted to a work that may be pretty safely described as monumental, if not definitive (for the subject is too vast to be exhausted in a single volume), Mr. Havell has placed architects under a lasting obligation for he has very considerably extended their horizon.

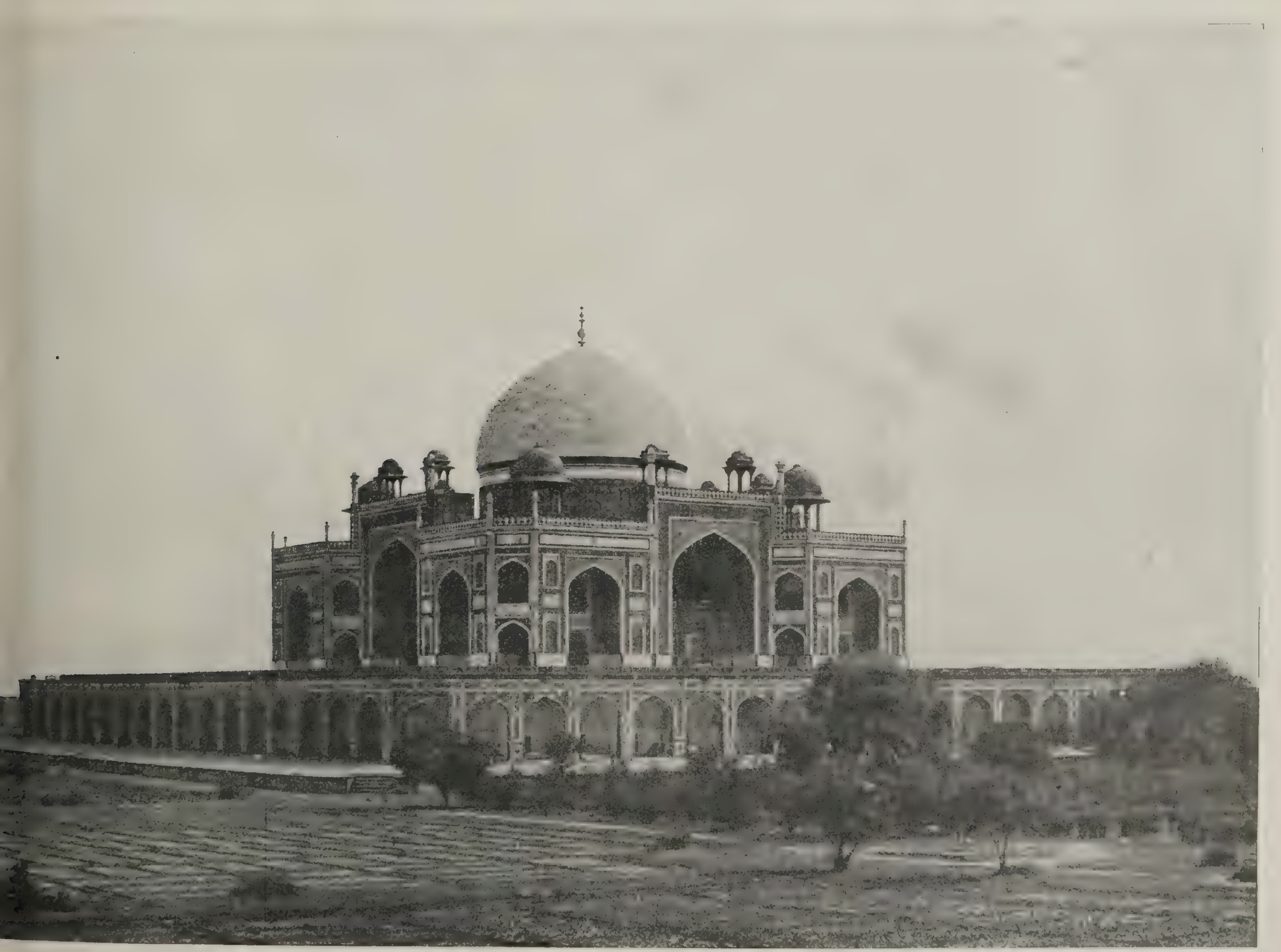
The tomb of Humâyûn, of which the illustration is here shown, is perhaps more Persian in character than any other important building in India, and is not, Mr. Havell observes, a direct imitation of Persian building, but has an individuality of its own. It affords one of the earliest indications of the development of the art of stone inlay, which culminated a century later in the decoration of the Tâj. It stands in a walled enclosure, which was originally laid out as a formal garden in the usual Mogul style. The mausoleum stands on a large square terrace, 22 ft. high, and surrounded by an arcade, Persian in design, but built of red sandstone, with white marble inlay. The brick construction of the central dome, which has an outer casing of white marble, was probably the work of a Persian dome-builder. Fergusson described it as a noble tomb, but saw a certain poverty and coldness in the design. The actual mausoleum is an octagonal department, 47 ft. 4 in. in diameter and surrounded by four other octagonal chapels 23 ft. in diameter. It dates from the middle of the sixteenth century.

"Indian Architecture: Its Psychology, Structure, and History from the First Mohammedan Invasion to the Present Day." By E. B. Havell. With illustrations. Pages xx. + 260, 10¼ ins. by 8 ins. London: John Murray, Albemarle Street, W. Price 30s. net.

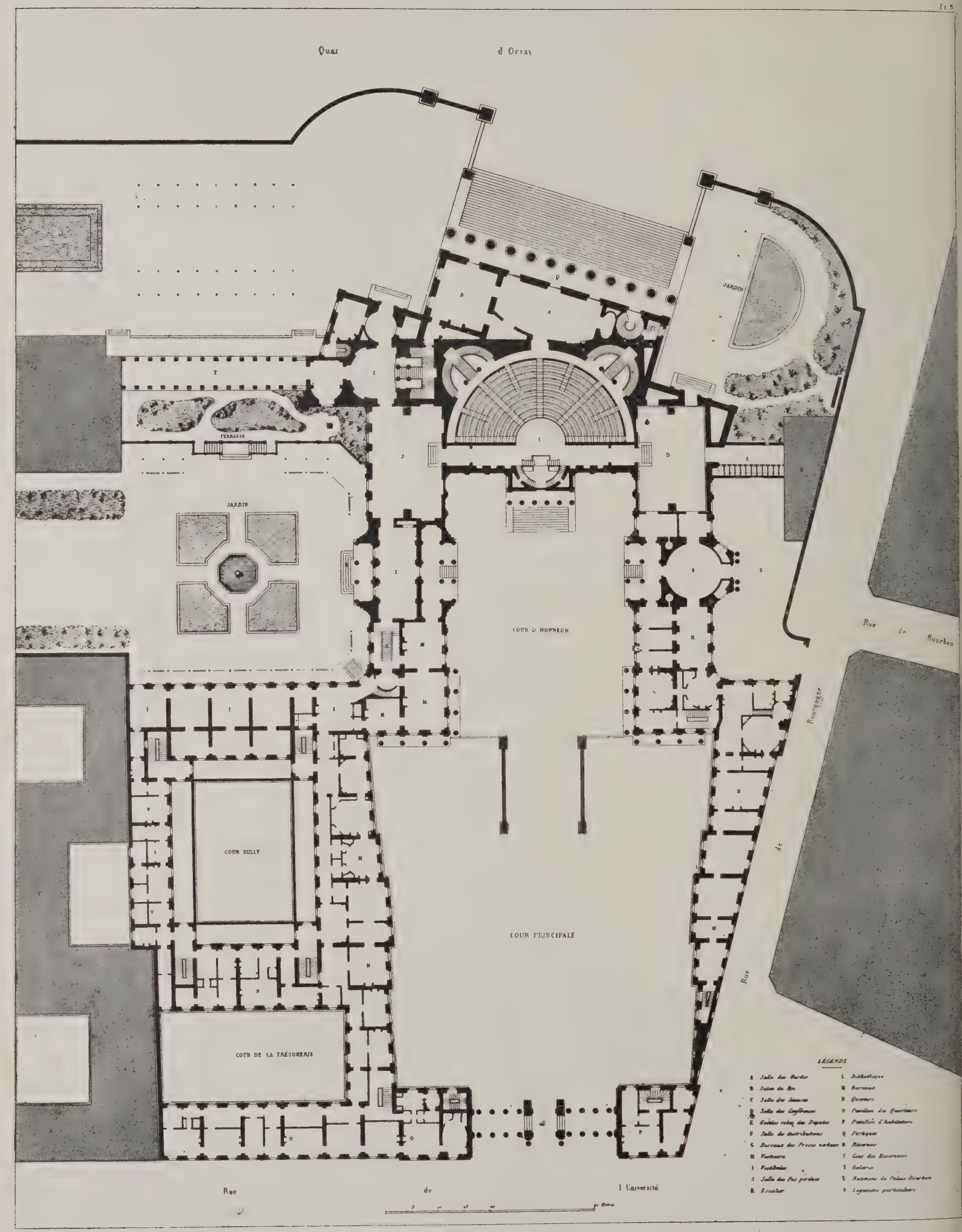
Great Malvern Priory Church.

An interesting monograph on Great Malvern Priory Church has been added by Messrs. G. Bell and Sons to their admirable "Cathedral Series." Like its predecessors, this little volume is distinguished from the mere perfunctory guidebook by the scholarship which has been devoted to its preparation. Its author was sometime vicar of Malvern, and his book is the product of intimate knowledge and diligent research. Apparently the priory was founded in 1085, but the priory church was reconstructed in the fifteenth century, the whole building having been completed by 1460. As Aldwin built it in the eleventh century, the church was of the Romanesque type common to the West of England—cruciform, with a central tower, the nave, of six bays, having narrow aisles. The fifteenth-century tower is manifestly copied from that at Gloucester. In 1812 it was decided that " the windows be repaired by proper persons," who " pieced together fragments from various windows in wild confusion, inserted the Latin inscriptions upside down and without the least reference to the subjects above them, and mingled hideous coloured glass of the eighteenth and early nineteenth centuries with the superb glass of the fifteenth century." The little book is written in an interesting style, and the subjects of the forty-two illustrations have been selected with excellent judgment, but they should have included plans.

" A Short Account of Great Malvern Priory Church: A History of the Monastry, and Description of the Fabric, with a Chapter on the Ancient Glass and Tiles." By the Rev. Anthony Charles Deane, M.A. With 42 illustrations. Pages xii. + 102, 7½ ins. by 5 ins., price 1s. 6d. net. London: G. Bell & Sons Ltd.



TOMB OF HUMÂYÛN, DELHI.



CHAMBRE DES DÉPUTÉS, PARIS: PLAN. JULES DE JOLY, ARCHITECT.

(See Plate in this issue, also page 187).

PECIAL LEGAL REPORTS.

aving Charges : Important Judgment.

ayor, etc., of Gateshead v. Lumsden.

h 10. Court of Appeal. Before Lord Sumner, d Justice Kennedy, and Mr. Justice Lawrence.

his was an appeal of the defendant in action of the Mayor, etc., of Gateshead umsden from a judgment of Mr. Jus- Rowlatt at the Newcastle Assizes.

r. Walter Ryde, K.C., for the appel- , said the action was brought by the poration of Gateshead to recover ey for the making of roads abutting on ch were houses owned by the defen- . It was in the nature of a test action, it depended ultimately on the Income Acts. The amount was not in dis- , but the question at issue was whether defendant was entitled to deduct inte- for income-tax and pav to the Corpo- n the net sum only after deducting the ne tax. The defendant paid the whole unt claimed after deducting income- The learned judge had held that the ndant could not make such deduction r under the local Public Health Act e Income Tax Acts, basing that find- n the law between a banker and a cus- r in respect of loans to the latter. nsel submitted the judge was distinctly g.

rd Sumner said if the defendant had the money punctuallv when due, there d have been no interest from which ould claim to deduct income-tax. Be- e the Corporation had been indulgent, should he benefit?

. Ryde said the Corporation had let matter rest for six or seven years. nsel said the Corporation were not en- to insist upon the whole 5 per cent. est without the deduction for income- The Corporation had plenty of funds loans at $3\frac{1}{2}$ and 4 per cent., therefore should they demand 5 per cent. on the anding debt due by the defendant? s not legal, and it was unjust and un- nable. It was a good investment to w money at $3\frac{1}{4}$ or $3\frac{1}{2}$ per cent. and it at 5 per cent.

thout calling upon counsel for the re- dents, the Court dismissed the appeal, ng that the appellant had no power duct income-tax.

An Abandoned Building Scheme.

ens v. The Junior Army and Navy Stores, Ltd.

12. Chancery Division. Before Mr. Justice .

is was an action by the plaintiff st the defendants to recover posses- of land near Tadworth, Salisbury , also a sum as compensation in lieu erection of certain buildings.

ppeared that in 1904 or 1905 the de- nts agreed to purchase a certain of land from the plaintiff and to thereon a building of the value of o. The Government at that time mplated the erection of barracks at orth to accommodate 20,000 men, s persons were not then allowed to stores on Government land the defen- purchased the land for the erection res, it being adjoining the Govern- land. The defendants agreed to pay nd rent of £5, to be increased to £50 ereabouts. Before the defendants get their buildings up the Govern- of the day had changed and stores allowed to be erected upon Govern- land. The defendants thereupon abandoned their scheme to erect their £2,000 building, and plaintiff brought this action.

The defendants contended that the plaintiff had not suffered any damage, as the value of the land was only some £200 or thereabouts.

His Lordship found in favour of the plaintiff and awarded him £2,000 damages.

It was mentioned that the defendants would probably carry their case to the Court of Appeal.

Builder's Liability for Accident.

In the case of Hurlstone v. London Electric Railway Company and Dunkley, which was heard in the Court of Appeal on March 13, the decision of Mr. Justice Scrutton making the railway company liable for injuries to a lady who was struck by a piece of wood at Cranborne Street Station was set aside and judgment entered for the railway company, with costs. A full report of the appeal is held over.

IN PARLIAMENT.

(*By Our Press Gallery Representative.*)

Westminster Hall Roof.

In the House of Lords last week, Lord Southwark interrogated the First Commissioner of Works with regard to the condition of the roof of Westminster Hall.

Earl Beauchamp said that there had been an inquiry into the stability of the roof of Westminster Hall. The existing roof was not part of the original structure of William Rufus. It was constructed in the time of Richard II., at the end of the fourteenth century. When the hall was transferred to the Ancient Monuments Branch of the Office of Works, in 1912, it was decided to make a very thorough examination of certain representative trusses and bays. He was sorry to say that a very serious state of decay was shown to exist through the whole of that portion of the roof examined. It was due to the ravages of the larvæ of the anobiid beetle. The existence of dry rot was also recorded. In almost every instance the beams were attacked at the main structural point. In numerous cases junction beams had been hollowed out to a mere shell, and large cavities existed in which even the disintegrated dust had disappeared. The condition of the roof was such that had its construction on principles of design not been scientifically sound many of the trusses would undoubtedly have fallen. It was necessary, in order to ensure the stability of the present roofs, to take such steps as would prevent the further depredations of the larvæ of this beetle, and the most obvious way would be to replace through the roof the decayed beams of the structure; but the attack had progressed so far, and was of such serious dimensions, that if this method were adopted it would be necessary practically to reconstruct the whole roof. Apart from the very great cost involved, it was highly questionable whether such a structure would be of real historical interest. It had been determined to adopt a scheme of strengthening, which would preserve every vestige of sound timber now existing in the roof, and only to cut and piece beams so far as cavities and perished wood existed. In order to adopt this method, it would be necessary to carry out a scheme of steel reinforcement. By this means the great stress would be transferred to the steel reinforcement, which in turn would transmit the stress to the walls. The steel structure would be made practically invisible from below. It would not only carry the stress of the roof, but it would secure over a great number of years the sound timber in the present structure. The work would be of considerable difficulty of execution, and it would be costly. Until one bay had been successfully treated it was impossible to frame an estimate for the whole of the works. A sum of £10,000 was being taken in the estimates of the Office of Works for the coming year. As to the preservation of the beams from further attack by the larvæ of the beetle a small committee of experts had been making a series of experiments with chemical substances, and it was expected that the results of their deliberations would give them a method of dealing with the problem of this insect.

London Building Trades Dispute.

Mr. Wedgwood Benn informed Mr. Tyson Wilson that of the buildings in course of erection in the London District for the Office of Works, the work was entirely suspended on ten and partially suspended on nine. Six were progressing normally. Mr. Tyson Wilson suggested that as there was no dispute between the employers and workmen regarding hours of labour and wages or the general conditions of work as agreed to and signed by the two parties, the Office of Works should take over the jobs that were at a standstill and carry them on themselves.

Condition of St. Paul's Cathedral.

Mr. Fell, in the House of Commons, asked the Prime Minister if he had considered the reports relating to the condition of St. Paul's Cathedral and the need of money to assure its safety and if the Government proposed to make a grant.

Mr. Swift MacNeill, before the answer was given, asked whether the Prime Minister would bear in mind that St. Paul's had very special associations with the House of Commons, having regard to the fact that its builder, Sir Christopher Wren, was in several Parliaments a member of the House.

Mr. Asquith said he had seen some of the reports referred to, but the matter had not in its general aspects been before the Government officially. The question of what remedial steps, if any, were required was primarily one for the cathedral authorities.

Mr. Fell asked whether, if the matter came before the Government, they were likely to give it favourable consideration.

Mr. Asquith replied that he had not received any representations on the subject.

Mr. Swift MacNeill asked the Prime Minister to remember that St. Paul's was built with moneys obtained by Parliamentary grants at a time when public opinion was much weaker than at present.

Ancient Monuments Act.

Mr. Benn has stated that the First Commissioner of Works hopes to be able to publish the names of the Scottish as well as the English and Welsh Advisory Boards under the Ancient Monuments Act in a short time.

R.I.B.A. PROBLEMS IN DESIGN.

The designs submitted under Subject XIII. will be on view in the Galleries of the R.I.B.A. on March 20, 21, and 23 between the hours of 10 a.m. and 8 p.m. (Saturday 6 p.m.).

PROJECTED NEW WORKS.

Law Courts, etc., Newport.

Newport Town Council propose to provide new law courts and a town hall at a cost of £15,000.

Houses, Swansea.

Three hundred houses for the working classes at Town Hill are to be erected by the Swansea Housing Committee.

School Enlargement, Lee.

The Manor Lane L.C.C. School, Lee, is to be enlarged to provide places for an additional 190 scholars.

Smallpox Hospital, Wrexham.

Wrexham Rural Council have adopted a scheme for the erection of a smallpox hospital at a cost of £1,000.

Bridge, Carlton.

It is proposed to erect at Carlton a new bridge which will link up the Goole and Selby districts. The cost is estimated at £16,000.

Edinburgh Bridge Reconstruction.

The Streets and Buildings Committee of Edinburgh Town Council have decided to widen the bridge of Ashley Terrace at a cost of £1,140.

Garden Suburb, Chester-le-Street.

Chester-le-Street Council have secured over seventeen acres of land upon which a garden suburb is to be built. It has been decided to erect 198 houses at a cost of £50,609.

Town Planning, Wallasey.

A Local Government Board inquiry has been held at Wallasey into the application of the council for permission to prepare a town-planning scheme for a total area of 1,423 acres.

Pier Roof Garden, Rothesay.

Rothesay Harbour Trust have resolved to ask Mr. J. B. Brodie, of Glasgow, to prepare plans for new pier buildings, with roof garden for entertainments. The cost is estimated at about £10,000.

Dartmouth College Extension.

The erection of barracks at Dartmouth for the accommodation of the men on board the old cadet training-ship Britannia, which has for a long period been on the sale list, is contemplated by the Admiralty.

Civic Centre, Swansea.

Swansea Parliamentary Committee have decided to recommend the adoption of Victoria Park as the civic centre of the future, which, it is suggested, can be realised at a cost of £160,000. The idea is first to erect a Guildhall at a cost of £70,000.

Scottish National Portrait Gallery Reconstruction.

The National Portrait Gallery, Queen Street, Edinburgh, is to be reconstructed, and it is estimated that the building will be closed to the public for a period of two years. The entire cost of the work is estimated at £15,000.

Sir John Moore Memorial, Shorncliffe.

The committee of the memorial to Lieut.-General Sir John Moore have entrusted the design of the library at Shorncliffe to Sir Aston Webb, and that of the statue to Mr. John Tweed. It is proposed to begin building the library at an early date, but the sum available for the statue is at present insufficient.

London.

The L.C.C. have consented to the execution of the following works:—

Finsbury, East.—Formation of openings in the party wall at 10-18, Goswell Road, Finsbury, at the basement and ground-floor levels, on the application of Messrs. G. and T. S. Vickery, on behalf of Messrs. G. Wagner and Co.

Holborn.—Building upon a site abutting upon Kingsway, Kemble Street, and Keeley Street, Holborn, on the application of Messrs. G. and T. S. Vickery, on behalf of the General Electric Company, Ltd.

Hoxton.—External iron structure over the public way of Merritt's Buildings, Worship Street, Shoreditch, and connecting blocks of the premises of the Home and Colonial Stores, Ltd., on the application of Messrs. Gale, Durlacher, and Emmett.

Islington, East.—Building at the rear of 122, Mildmay Road, Islington, on the application of Mr. C. C. Cooper.

Islington, North.—Ten houses on the northern and eastern sides of Fitzwarren Gardens, Islington, on the application of Edmondsons, Ltd.

Marylebone, East.—Addition at 14, York Terrace, St. Marylebone, on the application of Messrs. Clarke and Bracey, on behalf of Messrs. Dickie and Scott.

Marylebone, West.—Building at 27, Grove End Road, St. Marylebone, on the application of Messrs. A. H. Paine and Son, on behalf of Mr. J. H. Roberts.

Paddington, South.—Uniting 106-108, Westbourne Grove, Paddington, by means of openings at the first and second-floor levels, on the application of Mr. J. S. Beard, on behalf of Miss Hoare.

St. George, Hanover-square.—Addition at the rear of 8, Victoria Square, S.W., on the application of Mr. E. G. Mearles, on behalf of Mr. D. Wilkinson.

St. George, Hanover Square.—Additional cubical extent in respect of alterations at 421 to 429, Oxford Street, to abut also upon Lumley Street and Balderton Street, on the application of Messrs. H. O. Ellis and Clark, on behalf of Selfridge and Co., Ltd.

St. George, Hanover Square.—(1) Formation of openings exceeding the statutory width in division walls at the premises of the Hertford Street Motor Hiring Company, Hertford Street and Carrington Street, W.; (2) the use of double doors of special construction in lieu of double iron doors to such openings; (3) the omission of the parapets to division walls; and (4) the erection of an iron and concrete gangway, on the application of Mr. A. Palser.

Strand.—Iron and glass hood over the entrance to 52, Jermyn Street, on the application of Harrods, Ltd.

Strand.—Formation of party wall openings at the basement, ground, first, second, and third-floor levels, between 23, Suffolk Street, and 3, 4, and 5, Suffolk Place, Pall Mall, on the application of Messrs. W. S. Shepherd and Co., on behalf of the London, Singapore, and Java Bank.

Wandsworth.—Addition at Gate Lodge, Priory Lane, Roehampton, on the application of Messrs. W. Adkins and Son.

Wandsworth.—Uniting 45c and 47, Streatham Hill, Wandsworth, by means of openings at the ground-floor level, on the application of Mr. J. T. Taylor, on behalf of the Elhurst Garage.

Woolwich.—Wooden bay-windows to eight houses on the western side of Foots Cray Road, Eltham, on the application of Messrs. Pepler and Allen, on behalf of the New Eltham Tenants, Ltd.

COMPETITIONS.

Loughor Bridge.

At a conference, held recently at Nea between representatives of Carmarthe shire and Glamorgan, it was decided rebuild Loughor Bridge. Competit designs are to be invited, and a premi of £50 will be awarded to the author of selected scheme.

Secondary School, Douglas, I.M.

The Higher Education Board of Eastern District of the Isle of Man h decided to ask architects selected fr Liverpool and Leeds to submit designs a secondary school to accommodate scholars. The cost is estimated £21,000. Mr. E. R. Robson, F.R.I.B. of London, will act as assessor.

Clubhouse, East Preston, near Worthi

Competitive designs are invited Southstrand Sports Club for a clubho to be erected on the Southstrand Estate. plan of the site, with full particulars, r be obtained on application to Mr. Willi Hollis, Surveyor, Southstrand Es Offices, Church End, Finchley, N.

Public Offices, Shipley.

Mr. F. E. P. Edwards, A.R.I.B architect to the Sheffield Corporation, acted as assessor in the above competit has delivered his award as follows: No. 28 (£100), Messrs. Anderton Bailey, Shipley and Keighley; 2nd, No (£50), Messrs. Clark and Mosc Middlesbrough: 3rd, No. 9 (£25), Mr. T. Wilson, Frizinghall.

Town Hall, Middleton, Lancs.

Competitive designs are being inv for a new town hall to be built in L Street, Middleton. Mr. Hastwell Gray M.A., F.R.I.B.A., of Liverpool, is assessor. The architect placed first be commissioned to carry out the bu ing, and his premium of £100 will merged in the 5 per cent. payment on work. Second and third premiums of and £25 are offered. The Town Cou are prepared to spend a maximum £18,000, this sum to include £1,000 furniture and £300 for clerk of works.

Prudential Assurance Report.

The annual report of the Prude Assurance Company, Ltd., just iss shows a considerable increase in busi during the past year. In 1913 the nur of new policies in the ordinary branch 71,359, assuring the sum of £6,849,224 producing a new annual income £425,717. The premiums received £4,920,518, being an increase of £9 over the year 1912. In addition, £1 was received in premiums under the ness insurance tables. The numbe policies in force at the end of the year 917,091. In the industrial branch the miums received during the year £7,874,456, being an increase of £81 The total number of policies in this br was 19,778,135, of an average duratio ceeding twelve and three-quarter y The assets of the company, in branches, as shown in the balance-s after deducting £1,750,000 written securities, are £86,993,003, being a crease of £2,421,071 over 1912. The of bonus declared for last year has maintained, and an increased bonus per cent. will be distributed in ce cases.

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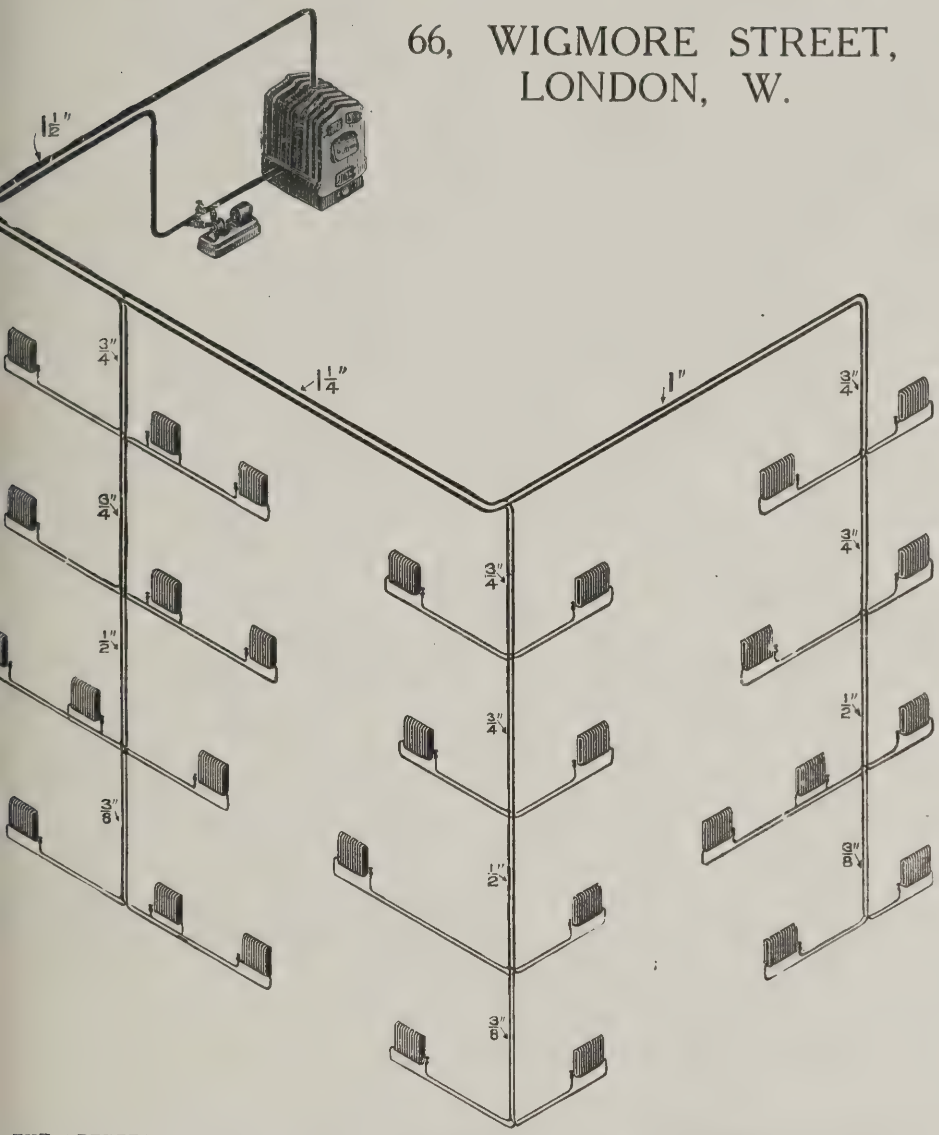

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Architects, Messrs. Hatch & Hinds

SEAMEN'S HOSPITAL and SCHOOL of TROPICAL MEDICINE, Albert Docks, E.
Architects, Messrs. A. Marshall Mackenzie & Son.

OFFICES of L.B. and S.C. Rly., London Bridge.
C. L. Morgan, Esq. (Engineer).

SHOWROOMS of MINERVA MOTOR CO., Tottenham Court Road, W.
Architect, G. Vernon, Esq.

ADDITIONAL PREMISES of PRUDENTIAL ASSURANCE CO., Holborn, E.C.

RECREATION HALL, Southall.
Architects, Messrs. A. Marshall Mackenzie & Son.

ST. NICHOLAS CHURCH, Charlwood.
Architect, Clyde Young, Esq.

ALL SAINTS' CHURCH, Goodmayes.
Architect, P. K. Allen, Esq.

AVINGTON PARK, Alresford.
Architects, Messrs. Millar & Cox.

THE GATE OF ST. JOHN, Ryde.
Architects, Messrs. Albury, Rising & Morgan.

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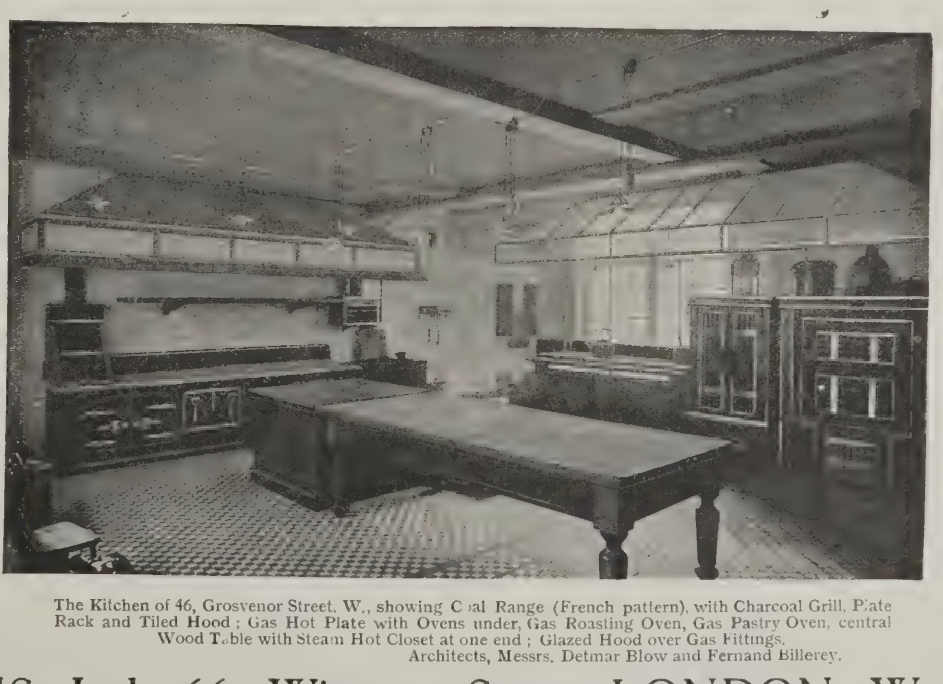

The Kitchen of 46, Grosvenor Street, W., showing Coal Range (French pattern), with Charcoal Grill, Plate Rack and Tiled Hood ; Gas Hot Plate with Ovens under, Gas Roasting Oven, Gas Pastry Oven, central Wood Table with Steam Hot Closet at one end ; Glazed Hood over Gas Fittings.
Architects, Messrs. Detmar Blow and Fernand Billerey.

BENHAM & SONS, Ltd., 66, Wigmore Street, LONDON, W.

ELECTRICAL NOTES.

The Electric Lighting Bill of the I.M.E.A.

The chief subject of discussion in electrical trade circles connected with contracting is at present the draft of the Bill promoted by the Incorporated Municipal Electrical Association "to give increased powers to local authorities with regard to electric lighting and for other purposes connected therewith." The history of the agitation which has evolved this Bill is a long one, accompanied by much bitterness, which it is impossible to deal with here. Both sides, municipal station engineers and electrical contractors, are probably right and wrong in many respects. The former have accused the contractors of being unbusinesslike and unenterprising, and of refusing to co-operate with the local electrical supply undertaking to mutual advantage. The contractors have accused the station engineers of endeavouring, wherever and whenever possible, to poach on their preserves by undertaking wiring work and the sale of electrical fittings, etc. Of course, companies have always been free to have their own showrooms, sales departments, and wiremen, and to compete with the contracting trade. But municipalities have had to acquire special powers to trade, and these have always been hedged around with restrictions, which the Local Government Board has not been slow to enforce, frequently at the instigation of the contractors. There have been several instances of litigation, notably against the Corporation of Leicester, and these incidents have not improved matters. There have also been round-table conferences and a previous Bill, which have been abortive, and so now the present Bill makes an attempt to settle the matter once for all by legislation. It will remain to be seen which side proves the stronger or can convince most members in a Parliament which is notoriously pro-municipal.

It is understood that the Bill as published has not given much satisfaction to electrical contractors, although, on reflecting upon its provisions, they may see ultimately that they are not likely to obtain such liberal terms another time if they do not accept the present Bill. As a matter of fact, they are treated fairly generously as a class, and if they take full advantage of the powers conferred they will, in municipal districts, reap considerable benefits and increase their business. The contractors have up to now taken up a somewhat dog-in-the-manger attitude, not being able to do the work themselves and yet opposing tooth and nail any suggestions of municipal hire-purchase wiring work, which might have been sublet to them. As a result, the sale of current and fittings has been greatly hampered, to the loss of the electric supply undertakings and the manufacturers, and also—ultimately, to the contractors.

The first clause sets forth that any local authority authorised to supply electricity may provide, sell, let for hire, repair, maintain and remove, but shall not manufacture—fittings, apparatus, and appliances for lighting, heating, and motive power . . . . and may demand and take over remuneration or rents and charges and make such terms and conditions as may be agreed upon. This is the pivot on which the whole Bill revolves. Clause 2 empowers the authorities to make contracts with any person for exercising the powers conferred by this section, and Clause 3, with its sub-sections, puts certain restrictions or modifications of their powers o
the undertakers in regard to Clause
Clause 4 and sub-sections are distinct
favourable to the contractors, providing
they do for permitting the trade to take fu
advantage of the showrooms of the unde
takers and to benefit by the sale of fitting
at their recommendation, as well as to pr
tect them against unfair competition
undercutting. Sub-section (*e*) of th
clause is the most important of the Bi
and prohibits undertakers from executi
wiring of private property and empowe
them to make contracts for the executi
of wiring, subject to their not giving und
preference to any contractor and provid
that they are not subject to this restricti
if there is no effective competition betwe
local contractors.

In other words, undertakers may car
out wiring where there is only one co
tractor, or where there are two or mo
who are not competing, but working han
in-glove. Of course, it will be said th
this last clause affords no real protection
the contractor, but this is not so really.
should stimulate existing contractors
compete for fear of municipal competiti
if they do not wake up. On the oth
hand, where there is only one contract
it is obviously unfair that the whole distr
should be in his hands and not obtain t
advantage of competitive prices. The
mainder of the clauses are not of so mu
importance and deal chiefly with finan
It is to be hoped that the Bill will
through. It is one of those Bills th
should have been passed long ago, a
would have been in any other country
Great Britain, where a small body claimi
a vested interest can hold out in all sorts
ways for a long time, to the disadvanta
of industry and the community in gener

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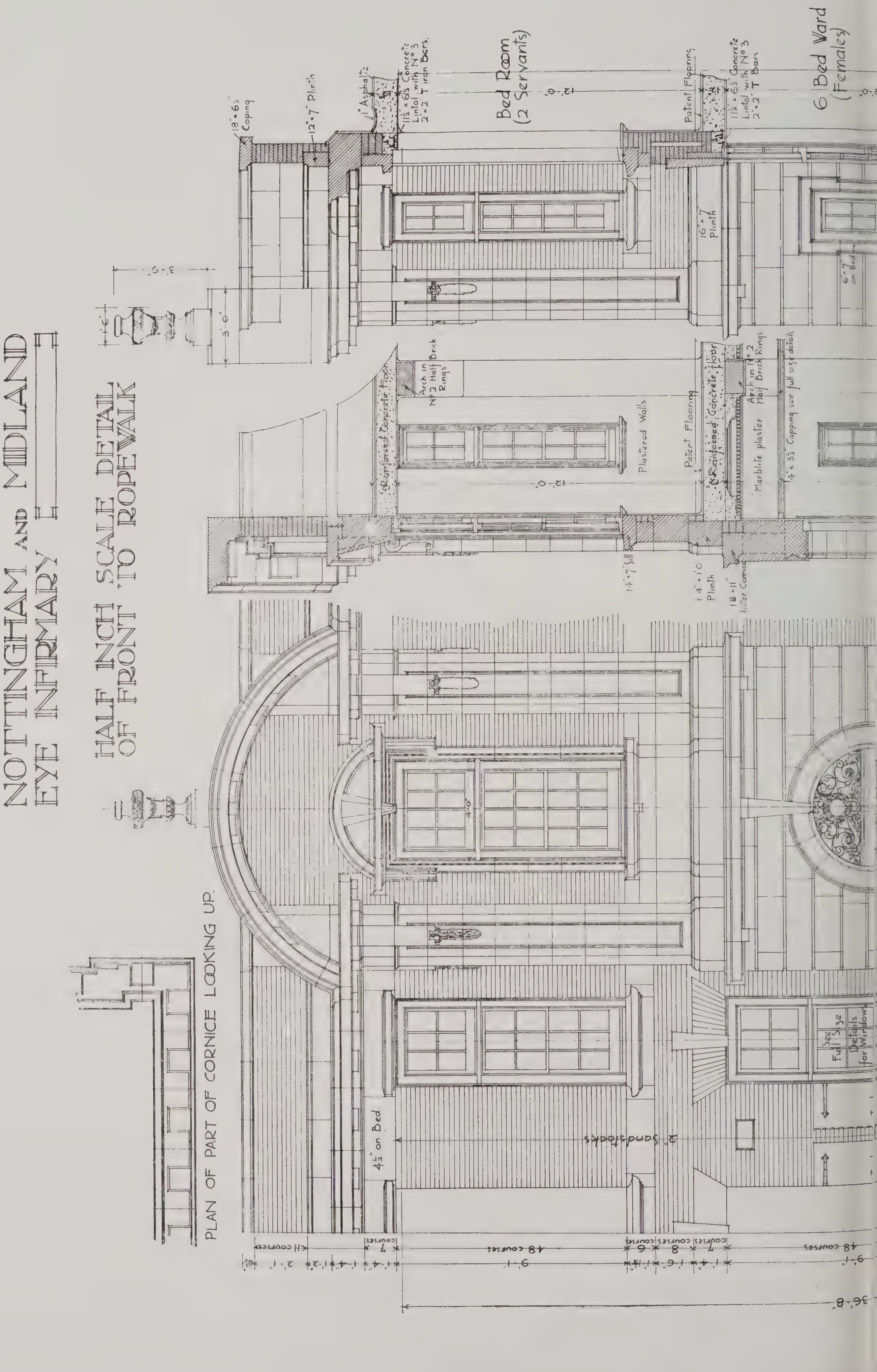
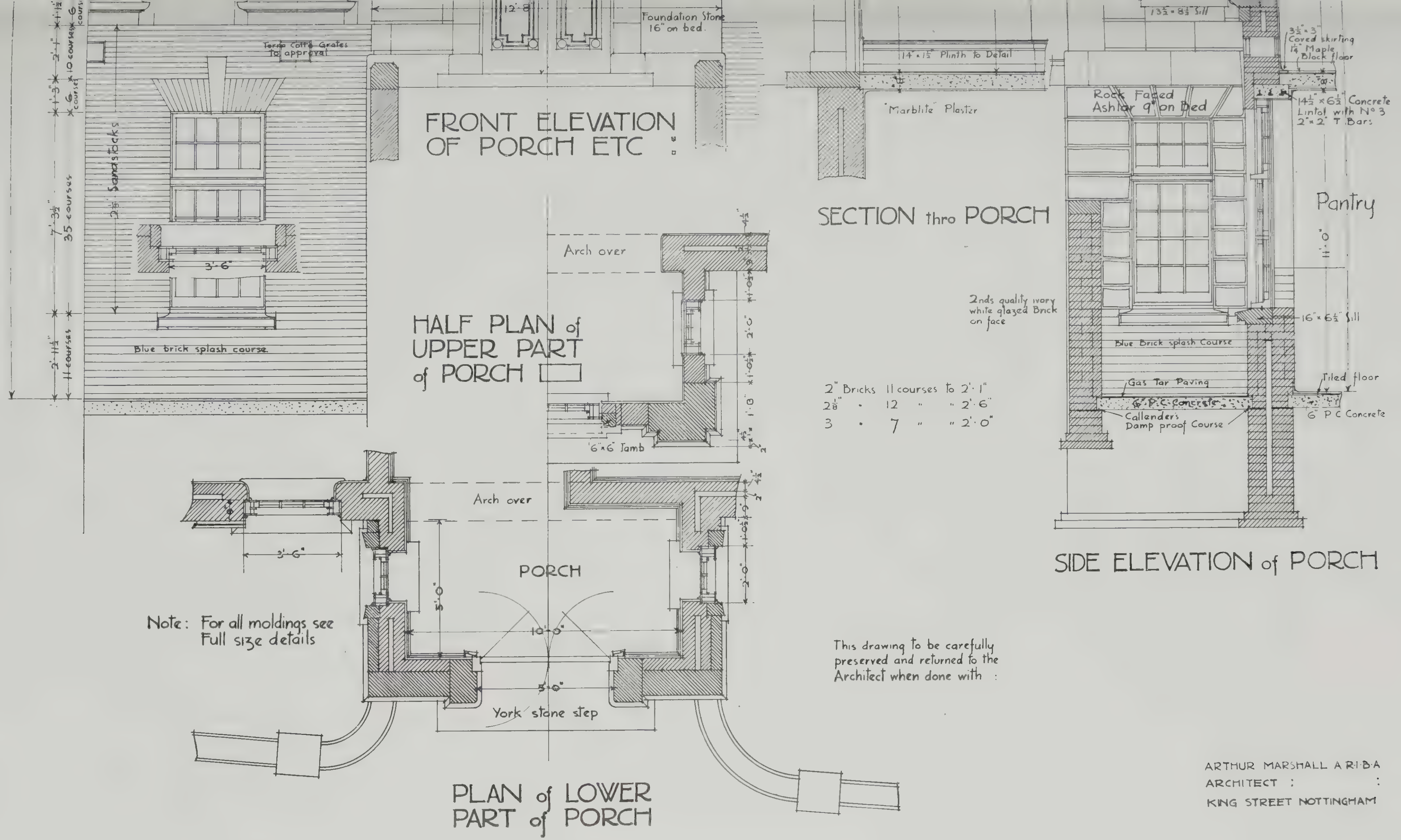
NOTTINGHAM AND MIDLAND EYE INFIRMARY

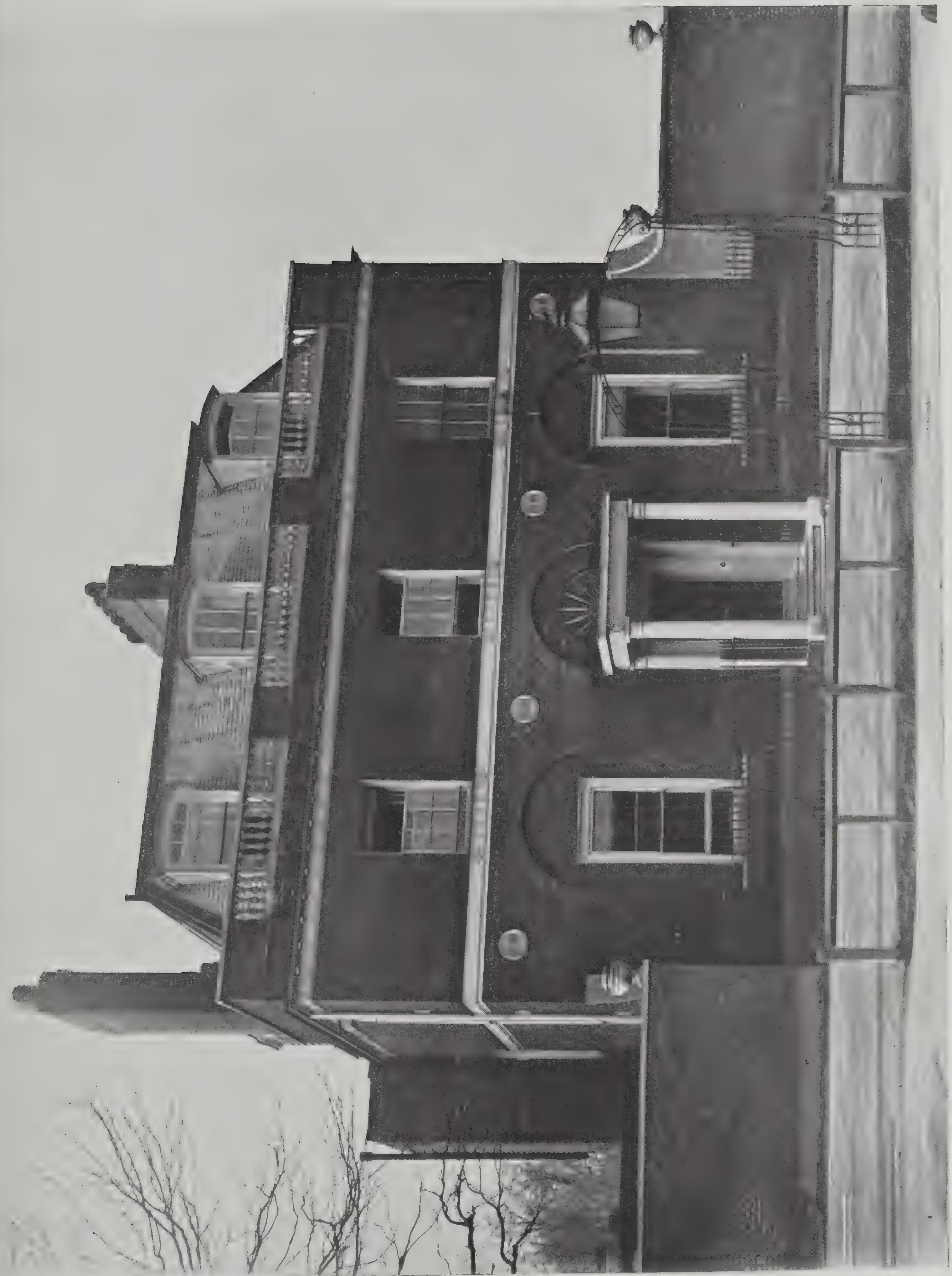
HALF INCH SCALE DETAIL OF FRONT TO ROPEWALK



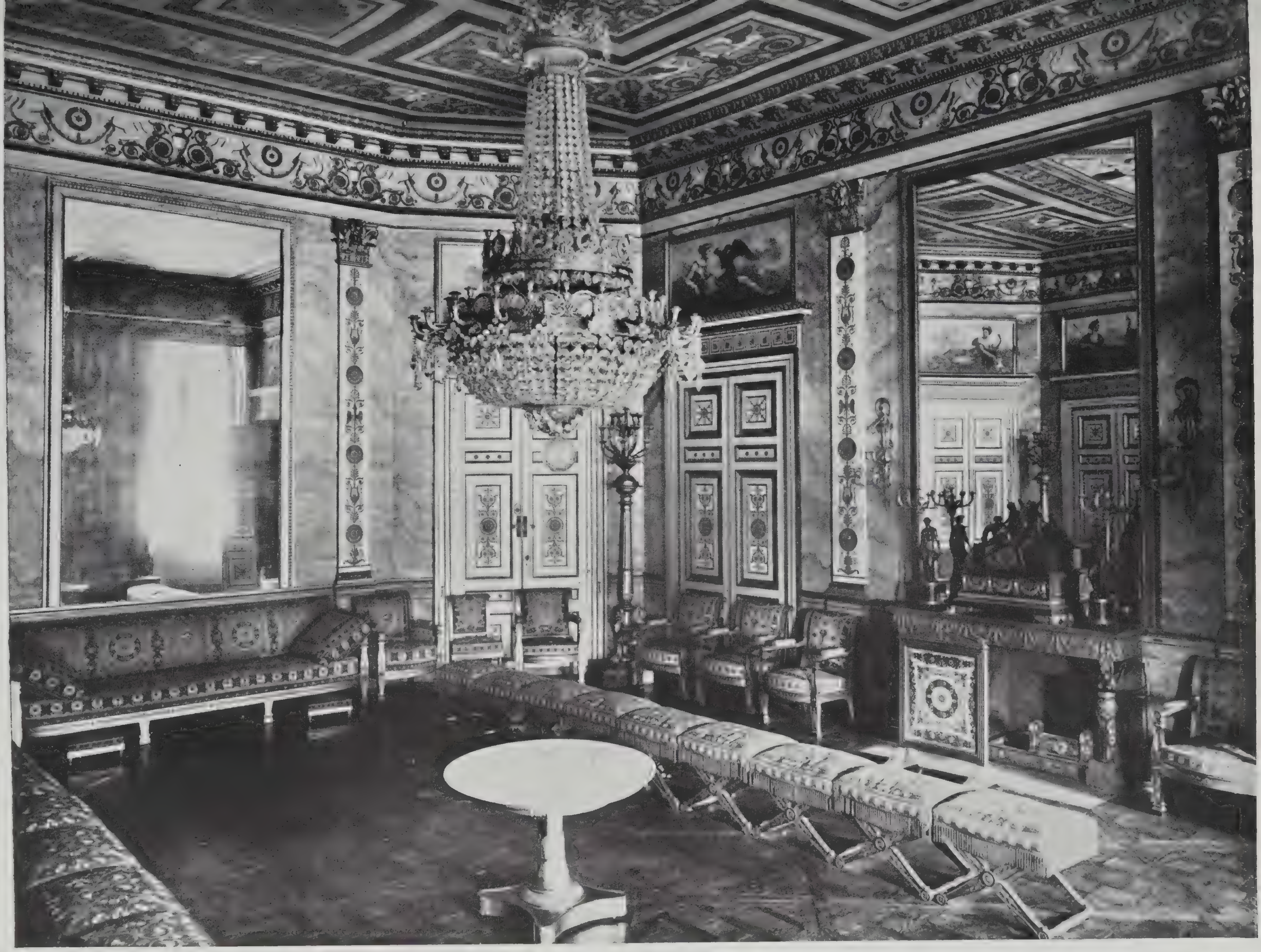

FRONT ELEVATION OF PORCH ETC
HALF PLAN of UPPER PART of PORCH
PLAN of LOWER PART of PORCH
SECTION thro PORCH
SIDE ELEVATION of PORCH
12'·8"
Foundation Stone 16" on bed.
Terra Cotta Grates to approval
2½" Sandstocks
3'·6"
Blue brick splash course
35 courses
11 courses
10 courses
6 courses
7'·3½"
2'·11½"
Arch over
2'·0"
1'·0"
1'·8"
6"×6" Jamb
PORCH
10'·0"
5'·0"
York stone step
Note: For all moldings see Full size details
14"×15" Plinth to Detail
"Marblite" Plaster
2nds quality ivory white glazed Brick on face
2" Bricks 11 courses to 2'·1"
2⅛" · 12 " " 2'·6"
3 · 7 " " 2'·0"
This drawing to be carefully preserved and returned to the Architect when done with :
13½"×8½" Sill
Rock Faced Ashlar 9" on Bed
3½"×3" Cored skirting
1¼" Maple Block floor
14½"×6½" Concrete Lintol with No 3 2"×2" T Bars
Pantry
16"×6½" Sill
Blue Brick splash Course
Gas Tar Paving
6" P.C. Concrete
Callenders Damp proof Course
Tiled floor
6" P C Concrete
ARTHUR MARSHALL A·R·I·B·A
ARCHITECT :
KING STREET NOTTINGHAM

WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XIX.—NOTTINGHAM AND MIDLAND EYE INFIRMARY: DETAIL OF FAÇADE.

ARTHUR MARSHALL, A.R.I.B.A., ARCHITECT.

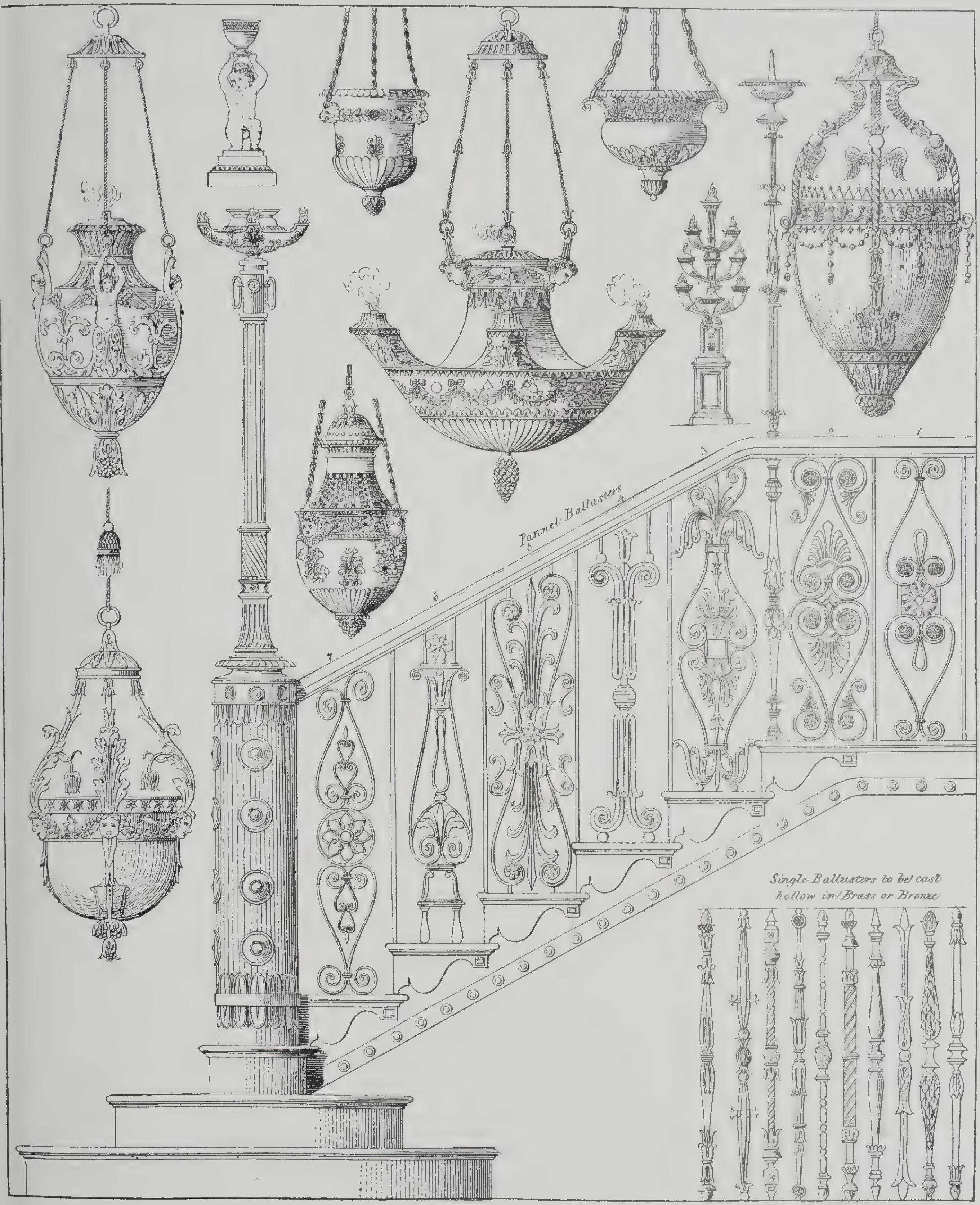


SMALL HOUSES OF THE LATE GEORGIAN PERIOD. I.—"THE WICK," RICHMOND HILL, SURREY.

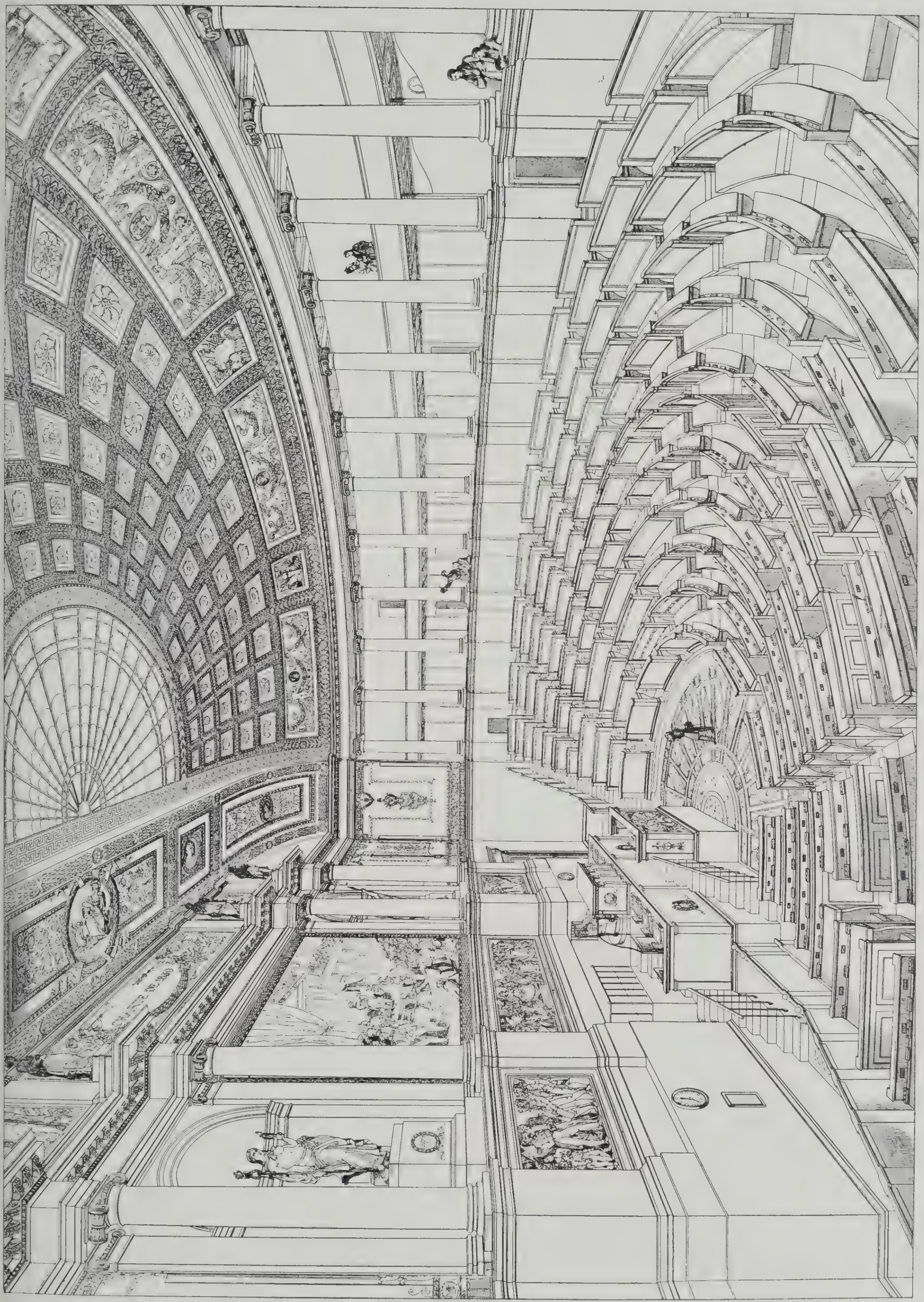


PALACE INTERIORS. V.—COMPIÈGNE: SALON DES DAMES D'HONNEUR.

JACQUES-ANGE GABRIEL, ARCHITECT.

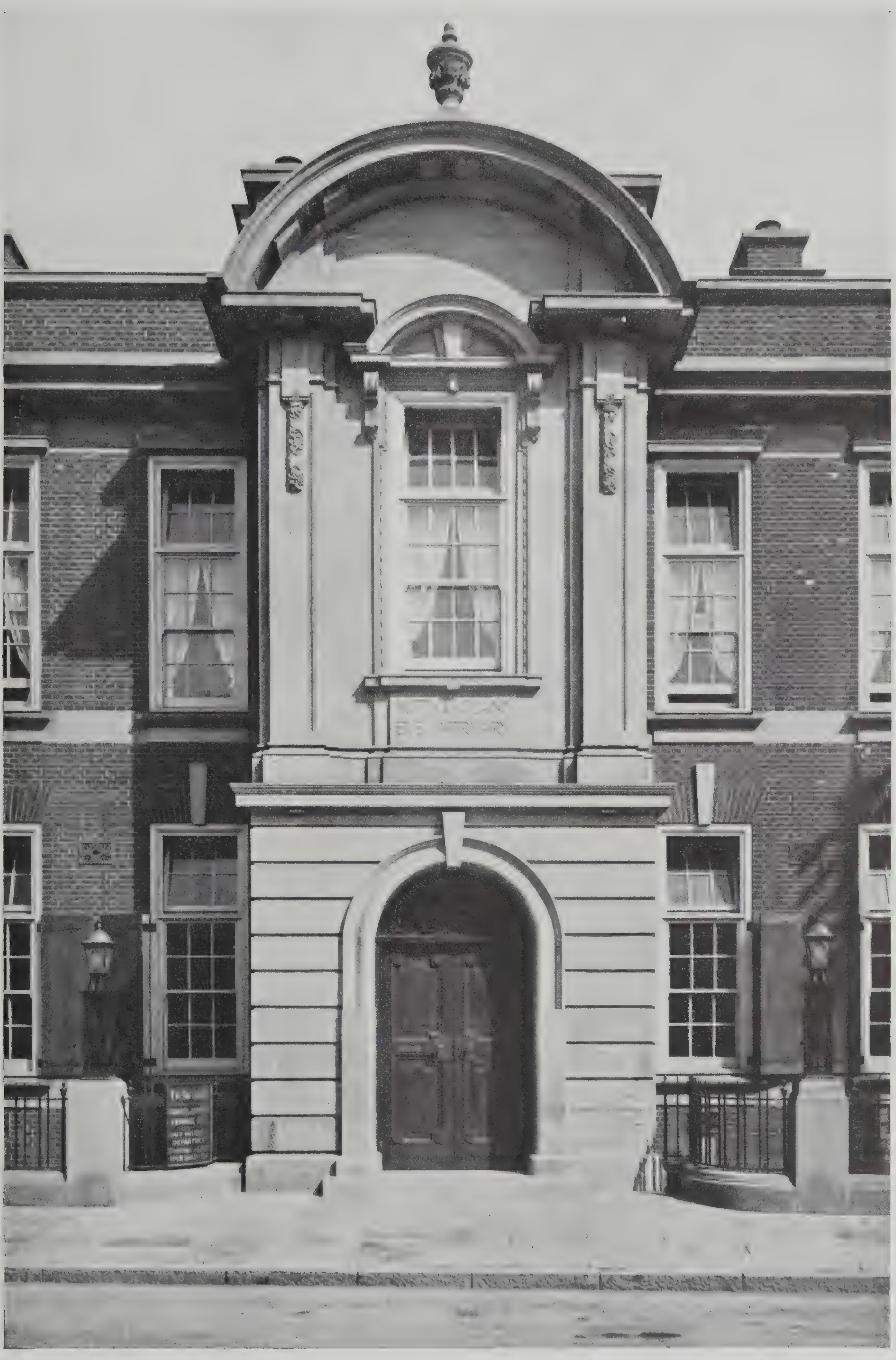


COTTINGHAM'S DESIGNS FOR IRONWORK. VII.—LAMPS, NEWELS, AND BALUSTERS FOR STAIRCASES.



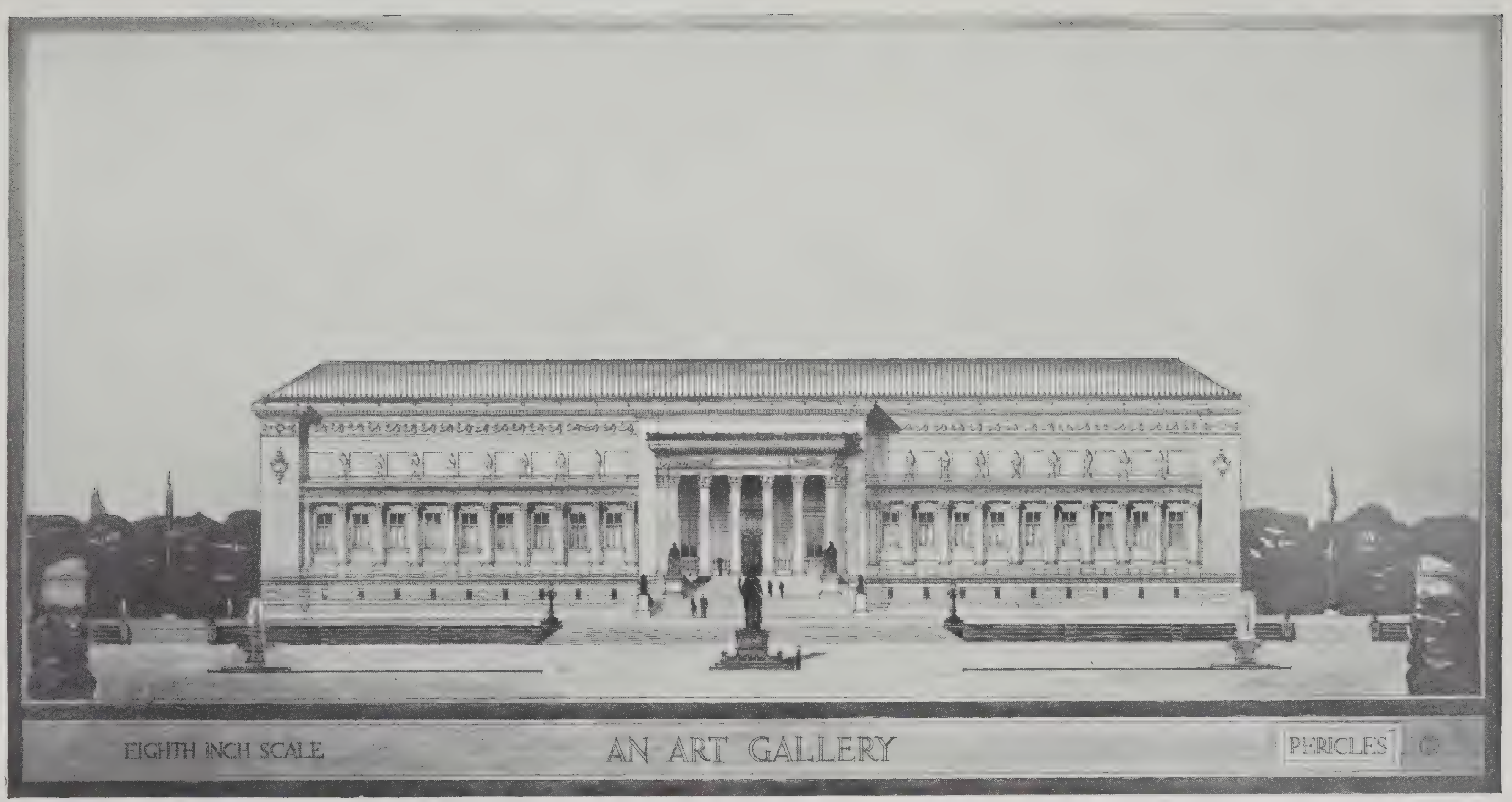
MONUMENTAL ARCHITECTURE. XII.—CHAMBRE DES DÉPUTÉS, PARIS: SALLE DES SÉANCES.

JULES DE JOLY, ARCHITECT.



CURRENT ARCHITECTURE. XLVIII.—NOTTINGHAM AND MIDLAND EYE INFIRMARY: DETAIL OF FAÇADE.

ARTHUR MARSHALL, A.R.I.B.A., ARCHITECT.



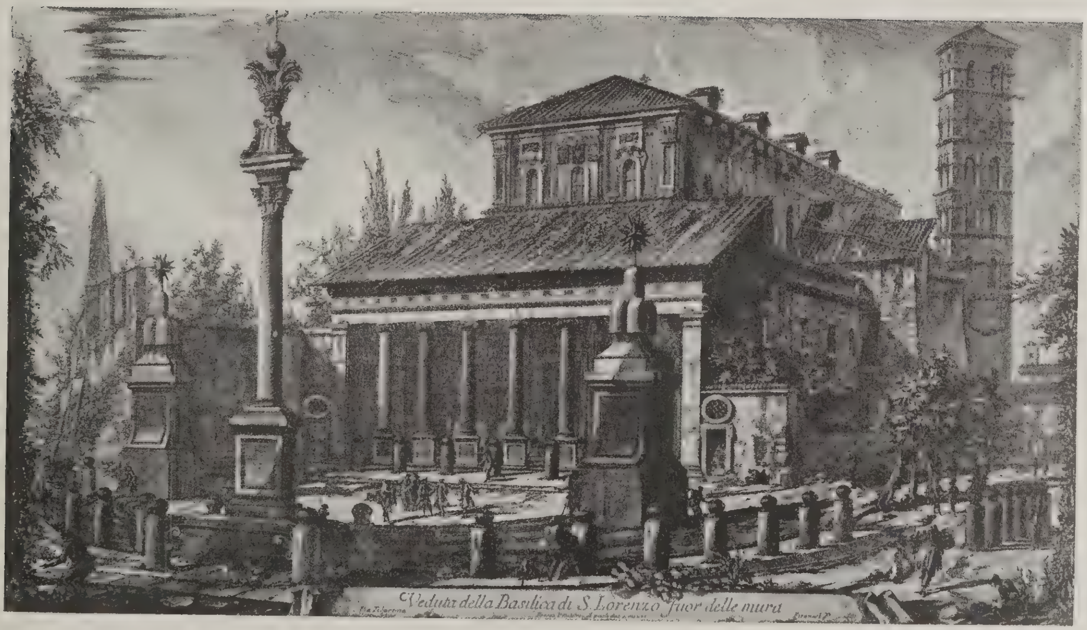
STUDENTS' DRAWINGS. XII.—ROME SCHOLARSHIP IN ARCHITECTURE: AN ART GALLERY IN A PUBLIC PARK.

BY F. JENKINS.

THE ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, March 25, 1914. Volume XXXIX. No. 1003.

No. 77.


Veduta della Basilica di S. Lorenzo fuor delle mura

(*From Piranesi.*)

THE ARCHITECTS' &
BUILDERS' JOURNAL.

MARCH 25, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1003.

Main Roads In and Out of London.

WHEN a great city like London, Berlin, or Brussels finds itself to consist of a central trunk surrounded by overgrown tentacles which, though manifestly sprung from it and owing their lifegiving circulation to its heart, have yet acquired the power of independent action, it can be readily understood that this octopus-like monster is no easy matter to keep under control. For several years past Government departments, disinterested societies and enthusiastic individuals have busied themselves with making plans for Greater London which might infuse some form and arrangement into its sprawling limbs, but the unfortunate part of it has been that the separate limbs have never been approached individually, and the monster, as a whole, has turned a singularly deaf ear to the voice of the charmer. Though certain people are apt to consider that town-planning, which may be described as the national taming of the monster, is only a matter of main road provision—which single view is frankly an incomplete one—there can be no doubt that it is the first step; and, in spite of the danger of involving our metaphor, we might suggest that the imposing of a system of main roads on a town might be compared to the infusing of a bony anatomy into a shapeless jellyfish.

What few radial roads London possesses are not due to any forethought, but to the survival of the old country approach roads; and in most cases they preserve their obvious origin, being narrow and twisting except where we are indebted to those Roman engineers whose planning powers we have as yet been unable to surpass. The Romans were able to deal with the whole country with a high hand; we must be content with the humbler method of bringing the separate tentacles together into friendly intercourse and showing them that co-operation is better than isolation or mutual antagonism, and then, while they are in this pleasant mood of agreement, drop the hints for an organic framework which they may adopt as if it was their own suggestion.

This is the origin of the sectional conferences of Greater London authorities on arterial roads, which Mr. Burns, as one of his last acts at the Local Government Board, has called into being. For this purpose London within the metropolitan area has been divided into six sections, the divisional lines wisely coinciding with existing main roads and not following the arbitrary divisions of urban district boundaries. In addition to the local authorities contained within these sectional areas and some important authorities outside the metropolitan boundary, several societies and associations are being represented, including the Royal Institute of British Architects, the Surveyors' Institute, the London Society, the Royal Automobile Club, and others.

At a first glance one might be inclined to ask, what decisions can such sectional conferences arrive at, after six or more months' protracted discussion, and what likelihood can there be of putting any decisions they may come to into execution? Frankly, we have never considered conferences as a means of accomplishing a
constructional piece of work—their usual functi
indeed, is to talk over and enlarge upon what
already been done. But the great benefit of these c
ferences should be in the understanding of
another's position, which should leave the partak
authorities in a receptive state for a constructive m
which will gather up the piecemeal suggestions into
comprehensive system. There are, of course,
recommendations put forward for some time past
the London Traffic branch of the Board of Tra
which should form admirable topics for discussion
debate. It will be remembered that a short time a
when the Road Board offered to find the funds for
of these recommendations, their action was violen
opposed by the authority through whose area it wa
pass—an example of the futility of piecemeal tinker

That the moment for preparing the ground fo
road plan of Greater London is opportune, no one
deny. Many of the authorities are engaged upon to
planning schemes, and, as Mr. Burns pointed out in
speech of welcome to the first sectional commit
there is thus an opportunity of earmarking land
either side of narrow roads for future widening,
arranging in any road plans of schemes for such
main arteries as may be thought necessary. So
then, these conferences are not concerned with q
tions of immediate construction, but with forethou
for future road provision; and in this way a great
could be done at comparatively little cost. If only
disastrous sums continually paid for the widenin
comparatively modern streets were avoided in
future owing to the influence upon town-plan
schemes of these sectional discussions, they would
rendered a great service.

But something more positive is required, and
Samuel, as new President of the Local Govern
Board, made an announcement of first import
when he said that in the very near future the Imp
Exchequer was about to assume a very consider
part of the cost of main roads. Town-plan
schemes can earmark land for main roads, they
prevent further encroachments, and they can stop
suggested routes of new arteries being choked
unconsidered building; but they or the small aut
ties who promote them cannot construct great len
of colossally wide roads.

Mr. Samuel's declaration that the Govern
intends to lay proposals before Parliament this se
for the financing of main roads affects the w
country as well as London. At length there w
seem to be some prospect of a reasonable treatme
our system of main road communication, at prese
inadequate as compared with that of France.
rivalry between the county councils and the co
boroughs, which has been somewhat amusingly
trated by rival deputations bombarding the P
Minister last year and the President of the L
Government Board this year, has been
largely promoted by the questions of r
The present position is absurd enough.
main country roads, as is well known, are

ructed and kept in order by the county councils, e county boroughs having got out of any road ntributions except towards those within their own eas. The county councils naturally resent the eation of county boroughs or the extension of city undaries, as valuable rateable property for the pport of country roads is thereby lost to them. In e meantime, one may ask who is it that, under the adowy names of the county councils, really support e countr) roads—the rural areas? The great landvners? By no means; it is the small boroughs who pply the highest rateable value in the country. So at the country roads, the main lines of communica- on (other than railroads) between the great towns, e financed by the lesser towns, who have little use for em. If the rural areas alone had been responsible, e situation would have been solved long ago; for ving next to no rateable value, the roads would have ne to ruin and the State would have stepped in: but e non-county boroughs, perhaps the most neglected mmunities in the country, have kept things going, ough, to add one final touch to this topsy-turvydom, eir sympathies are all with the county boroughs who ve been sucking their blood. The reason is that they emselves aspire to be county boroughs, and, by ying attention to their elder sisters, hope to get the cessary qualification of a population of 50,000 vered.

There is only one way out of this tangle: The county roughs cannot be taxed to support the country roads, r should the small towns be penalised; the State ist step in and maintain existing, and if necessary eate new, routes of communication over the face of e country. There must be no narrowness of vision snarling jealousy, and it must be recognised that the osperity of the great communities is also the osperity of the Kingdom. A start has rightly been de with the capital.

L. P. A.

"People's Theatres."

WHERE the tercentenary of Shakespeare's death is to be marked by the building of a memorial theatre—and we trust that this most propriate form will be assumed in more instances an are as yet apparent—the necessary preparations ould be made without delay. Indeed, seeing that a eatre really worthy of so great an occasion could rdly be finished by April 23, 1916, even if the lious ritual of foundation-stone laying were well er-passed, and the London labour difficulty had nished into thin air, even the very modest theatre contemplation for London ought already to be ng on its well and truly laid foundations, but the signs for it are yet to seek. In Melbourne, Aus- lia, a committee has just been formed with the ject of raising funds for the erection of a theatre ich is to cost £25,000, a sum that can hardly be nsidered adequate for anything more imposing than uilding of *petit bijou* character. Still, one is glad see that Melbourne is making a move, and is setting example that should be followed as promptly as sible by all English-speaking cities having a popu- on at all comparable to that of Melbourne, which this time must number some four hundred thousand abitants, or thereabouts. For the theatre, as the rmans in particular have realised, is so important eans of civilisation and culture as well as of mere usement, that every township should raise its temple Thespis; and the Shakespeare commemoration of 6 affords an unequalled opportunity to atone for past lamentable neglect of this plain duty. Miss sina Filippi, whose exquisite histrionic talent is tched by her exhilarating belief in the vitality and enerative force of genuine drama—she declares t standard plays produced at low prices have ome a strong antidote to virulent socialism in Milan, for example—is about to try, at the old Victoria Theatre in the New Cut, Lambeth, the courageous experiment of producing a succession of Shakespeare's plays for people who cannot afford to pay more than a few coppers for admission, twopence being suggested as the minimum. If the adventure turns out to be successful, a natural development to be anticipated is the widespread popularisation of the drama on a basis of low prices and inexpensive production. Thence might conceivably come a revulsion from the too sumptuous and almost barbarically splendid setting and housing of plays. In the case of the "people's theatres" which Miss Filippi hopes to see established, simplification must necessarily extend to the buildings, and we should probably get a mushroom crop of theatres of the baldest cinema type with bare internal walls and plain deal benches—a regrettable primitiveness that might, however, carry a measure of compensation in weaning some of the higher-priced theatres from their tendency towards mere gorgeousness. On the other hand, it might chance to have exactly the opposite effect; but we are hoping for the best from a new movement that certainly promises much interest from the architectural as well as the ethical point of view.

Scandinavia Revisited.

SOMEWHAT in advance of the ordinary tourist season, which for the northerly countries does not usually begin until May, the Prince of Wales has gone to Norway, consequently attracting this season a larger number of visitors than usual, especially from this kingdom. Architects for whom this happy incident may offer a solution of the annual holiday problem will be delighted to find Christiania quite an excellent example of town-planning of a simple kind, although it was laid out as long ago as the first quarter of the seventeenth century for King Christian IV. of Denmark, from whom, of course, it takes its name. It was he who created the capital, and therefore, unlike those cities which have merely "grown" haphazard, it shows a centrally conceived layout, with fine wide streets all orderly disposed in rectangular array. This same Christian IV. built the royal palace in which the prince will be lodged. Its exterior may mildly remind him of that of Buckingham Palace, and inside he will find apartments which Queen Maud has equipped in pretty close resemblance to the plenishings of Sandringham and Marlborough House. Scandinavian architecture is rather remarkable for its pronounced racial expression. Early wooden buildings, in spite of the ravages of fire, are not rare in Scandinavia. In some of the ancient timber churches the construction shows a frame filled in with slabs or thick upright planks. Most of these old churches date from the twelfth and thirteenth centuries, and some of them exhibit interesting peculiarities of planning as well as distinctive fenestration. Their carved scrollwork, called "Runic scrollwork," "dragon ornament," and so forth, is put to an extraordinary variety of effective purposes—for covering large surfaces as well as for the ornamentation of square columns and round pillars—and is applied to stonework and ironwork as well as to wood. Neo-Classic architecture of sorts is fairly prevalent in Norway, and is remarkable for independence, and even daring, shown in the treatment of the details, and is, in its own peculiar way, a remarkable manifestation of adaptation to environment.

Broad Sanctuary, Westminster.

WESTMINSTER HOSPITAL, which, as a building, can well be spared, is marked out for destruction, and although threatened buildings, like threatened men, live long, its disappearance is not likely to be postponed indefinitely. Its demolition will no doubt promptly follow the determination of what shall be done with the site. There seems to be some probability that this will be occupied by new municipal offices for the Westminster City Council. This would be, we are disposed to assent, an ideal arrangement, were it not for the disconcerting conviction that the town-hall is therefore foredoomed to be of a mediæval cast of countenance, unless its begetters have the courage to add further variety to the already heterogeneous collection of buildings adjacent or within sight. The sedate Abbey and serene St. Margaret's, the mock-mediævalism of the Houses of Parliament, the flauntingly Frenchified Sessions House, and the domed dignity of the Wesleyan Hall set the unhappy architect a problem that should make him a fanatical supporter of the proposal for a Ministry of the Fine Arts. Besides the character of the building, the not less important question of lay-out clamours for consideration. Than the area that includes the buildings named there is in London no site of more splendid potentialities, and there is none that demonstrates more poignantly, by the casual situation of the buildings which have been dumped upon it in accordance with no better principles than those arbitrarily prescribed by the exigencies and accidentals of land-tenure, the necessity for central and co-ordinative control by a competent town-planning authority. Even as it is, some considerable improvement may be effected by setting back the building which ere long must supersede the aggressively intrusive hospital; but the best that is practicable will be merely palliative, radical cure being out of the question. When those architectural and other draughtsmen who are wont to deepen our sighs for the might-have-beens are tired of elaborating grandiose schemes for the reformation of Trafalgar Square, Regent Street, and the Surrey side of the Thames Embankment, perhaps they will imagine a *bona vista* for Broad Sanctuary. Now is their opportunity.

Mr. Edward Schröder Prior, A.R.A.

MR. PRIOR'S election as an Associate of the Royal Academy, last Friday evening, is the rather belated recognition of an architect who has for many years occupied a prominent position in art circles. Since 1912 Mr. Prior has been Slade Professor of Fine Arts at Cambridge; he was one of the founders of the Art Workers' Guild, was its Master in 1906, and has been Secretary to the Arts and Crafts Society since 1902. As author and lecturer he is well known, his "History of Gothic Art in England" being not only an indication of his architectural sympathies, but one of the best modern books on this subject. As an architect, he has held official positions at Cambridge University, Harrow School, and Winchester College, and has been responsible for a number of churches and houses. He was a pupil of the late Norman Shaw, whose versatility he has hardly tried to rival, but whose line of architectural development he has, in part, followed with sincerity and admirable taste.

The National Galleries.

WE are glad to learn that the closing of the national collections, owing to the attempt to destroy the Rokeby Venus, is not likely to be maintained for very long. Considerable pressure has been brought to bear on the responsible authorities, and it is probable that by the time these lines appear a date will have been fixed for the reopening of the National and Tate Galleries. As might be expected there has been considerable speculation as to the steps that will be taken to prevent the repetition of suffragist attacks; but the officials preserve a very proper reticence. Meanwhile, it is satisfactory to note that the rooms on the west of Room I. were reopened to students last Thursday, and that next Thursday and Friday students will be re-admitted to the east rooms We presume that similar privileges will be granted a the Tate Gallery, where, we hear, the authorities hav been overwhelmed with applications for admission fron those whose work was thus rudely interrupted. On cannot help feeling that in these cases the deprivatio of the right to work is a far greater hardship than tha of the general public who have merely been denied th right of entry, though it is the latter grievance that ha been the most loudly ventilated; and we are therefor glad that the students' needs have been attended t first.

An Egyptian Reservoir.

THE excavations of the Egypt Exploration Fun at Abydos have ended for the season with a discovery of curious interest. This is what Strab described as a well or spring in front of the tomb o Osiris, near the temple; but Strabo's description wa seemingly incorrect, as, according to an account contributed by Professor E. Naville to "The Times," th building is really a gigantic pool or reservoir, wit three porches, constructed for the purpose of storin water during the high Nile. The building that contains the pool is about 100 feet in length and 60 i width, and is built of the most enormous stones to b seen in Egypt; the actual pool being a rectangle consisting of the two lateral aisles of the building and o the two ends of the middle one. As Professor Navill points out, this water work is the only one of its kin among the architectural antiquities of Egypt, and i of vast historical interest, as proving that these earl people had already observed very carefully the law of the rise and fall of the Nile. The fact that it clearl belongs to the unornamental age of the pyramids—tha is to say, the earliest known period of Egyptian architecture—tends to disturb the commonly held belief tha the earliest architecture was concerned with eithe temples or tombs. On the other hand, one must remember that the case of Egypt is unique in the world's history. It is the only country whose destinies have bee completely governed by a river, the only people whos physical and mental energies have been so largel swayed by the portent of an annual flood. Perhap therefore, it is not so very strange that a reservoir t hold the Nile waters should have been among the firs manifestations of its architectural mind.

The London Building Dispute.

THE issues of the negotiations for a settlement o the London building dispute are, at the time o writing, still in suspense. On Tuesday of las week, at a conference convened by the Nationa Federation of Building Trades Employers, at whic the London Master Builders, as well as the othe parties to the dispute, were represented, it was recommended that if the head executives of the various trad unions refused to countenance strikes started in violation of agreements, and would suspend all benefits an countersign all rules agreed upon, this action should b deemed a sufficient guarantee for their observanc Assent to this recommendation was given at a meetin on the following evening, of the officials of the variou unions concerned, but the L.M.B.A. council once mor preferred the primrose path of dalliance. They foun that the recommendation was "capable of so man interpretations" as to necessitate further inquiry as t its meaning. Information upon this point was to b obtained, and was to be considered at a future meetin They were still of opinion that a monetary guarant against violation of working agreements would provi the only satisfactory solution of the difficulty; but b this time they should be fully aware that there ha never been any likelihood that the unions would c could accept such a condition.

THE NEW ART GALLERY, MONTREAL.

HE New Art Gallery was recently opened by His Royal Highness the Duke of Connaught. On that occasion there was shown a remarkable loan lection of paintings, representing the more im- tant schools of the Renaissance as well as those of dern times. The erection of a building in which ntings and sculpture can be shown in a suitable ironment, without crowding, has resulted in an reased interest in artistic matters and a material wth in the membership of the Art Association.

The Museum is situated on Sherbrooke Street, in heart of the residential district. The present con- ction represents about two-thirds of the original eme, and the additions can be made without disturb- the plan or usefulness of the existing structure. commodation is provided for the exhibition of paint- s, sculpture, and objects of art, a library, a school of , and the necessary administration and utilitarian ces.

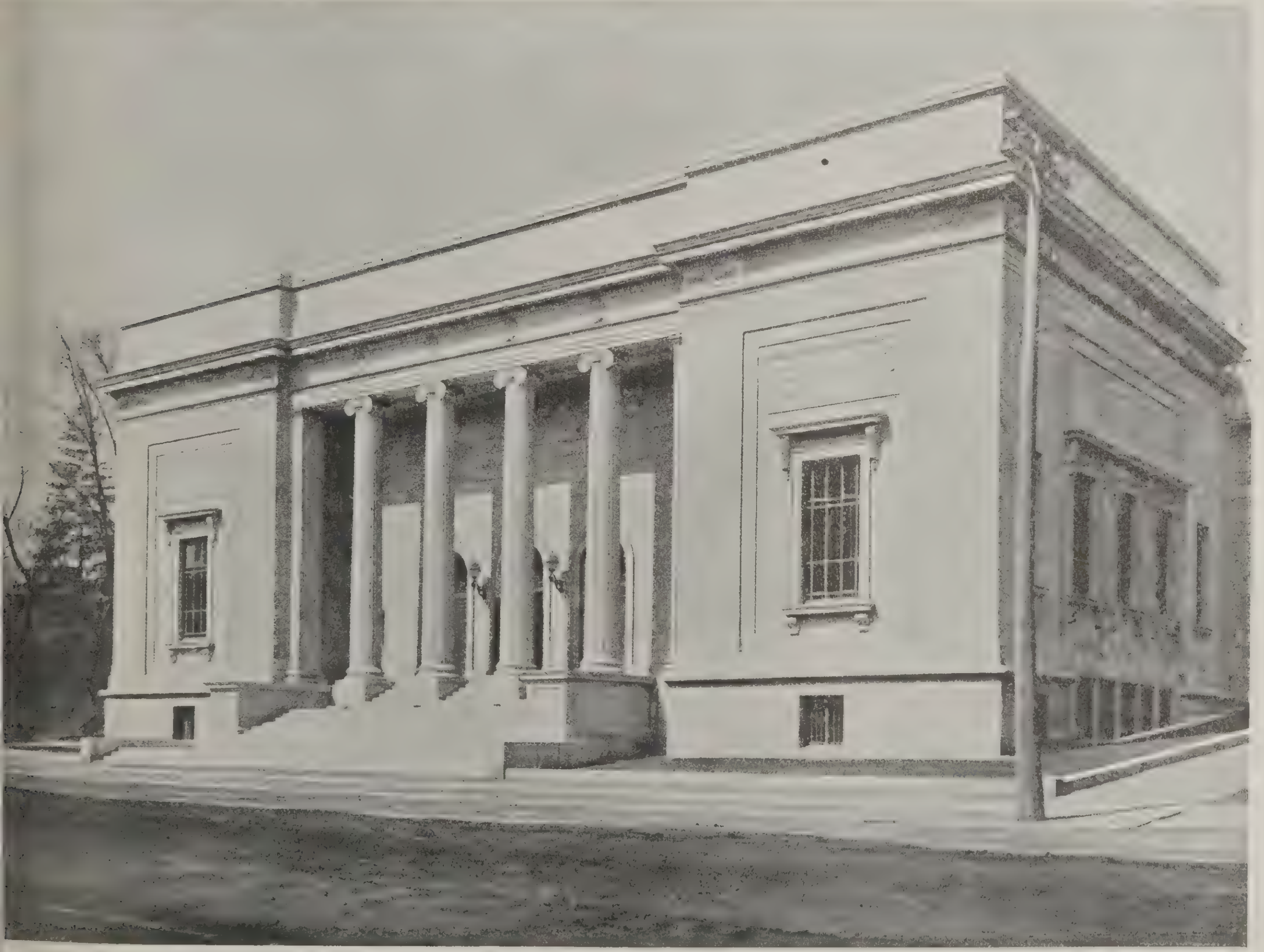
The exterior is of Classic character, and there is dent a frank acceptance of conditions of lighting nanded by the introduction of side-lighted galleries, d top-lighted studios for the school of art. The ture of the Sherbrooke Street façade is a large tico with Ionic columns. Three arched entrances rather Roman type are embellished with key-stones ing symbolical heads. The doors of oak are sur- unted by bronze grilles. Figures symbolising the s are flanked by acanthus scrolls, the surrounding grille work being rather open in type in order that light may enter into the vestibule and hall.

The wide flight of marble steps is flanked by pedestals which may receive groups of sculpture in the future.

The projecting wings express the interior, the large windows which light the library and exhibition room for case objects have panels of sculpture in low relief carried out by the Bromsgrove Guild of Canada under the architects' directions. The difficulty of obtaining unity in panels of such size and shape has been accomplished by the introduction of a colonnade in the background. This touch, rather Italian in inspiration, is successful in execution.

There are three top-lighted galleries on the first floor, the skylights being screened by the plain attic.

The oak entrance doors in Sherbrooke Street stand open in day-time, and double-swing glazed doors of light construction take their place in the entrance hall. This entrance hall extends across the greater part of the building; the staircase of honour, which is magnificent in scale, ascends directly opposite the entrance, ending at the first floor in a large rest room provided with tables, chairs, palms, etc. While used as an exhibition gallery, it, by means of alcoves, provides a place of rest where one can view a great part of the first floor, the staircase, entrance hall, etc., the view thus obtained being very comprehensive and interesting. The whole of the above portion of the interior is



THE NEW ART GALLERY, MONTREAL. EDWARD AND W. S. MAXWELL, ARCHITECTS.

built of solid Pavonazzo marble, the columns having solid bronze bases and capitals, while the railing of the staircase is of a similar material in a richly wrought pattern. The ceilings of the entrance hall and surrounding passages are vaulted and decorated, while the lighting is by means of eight carved alabaster columns and bowls, which give a diffused, soft light that is most agreeable and effective.

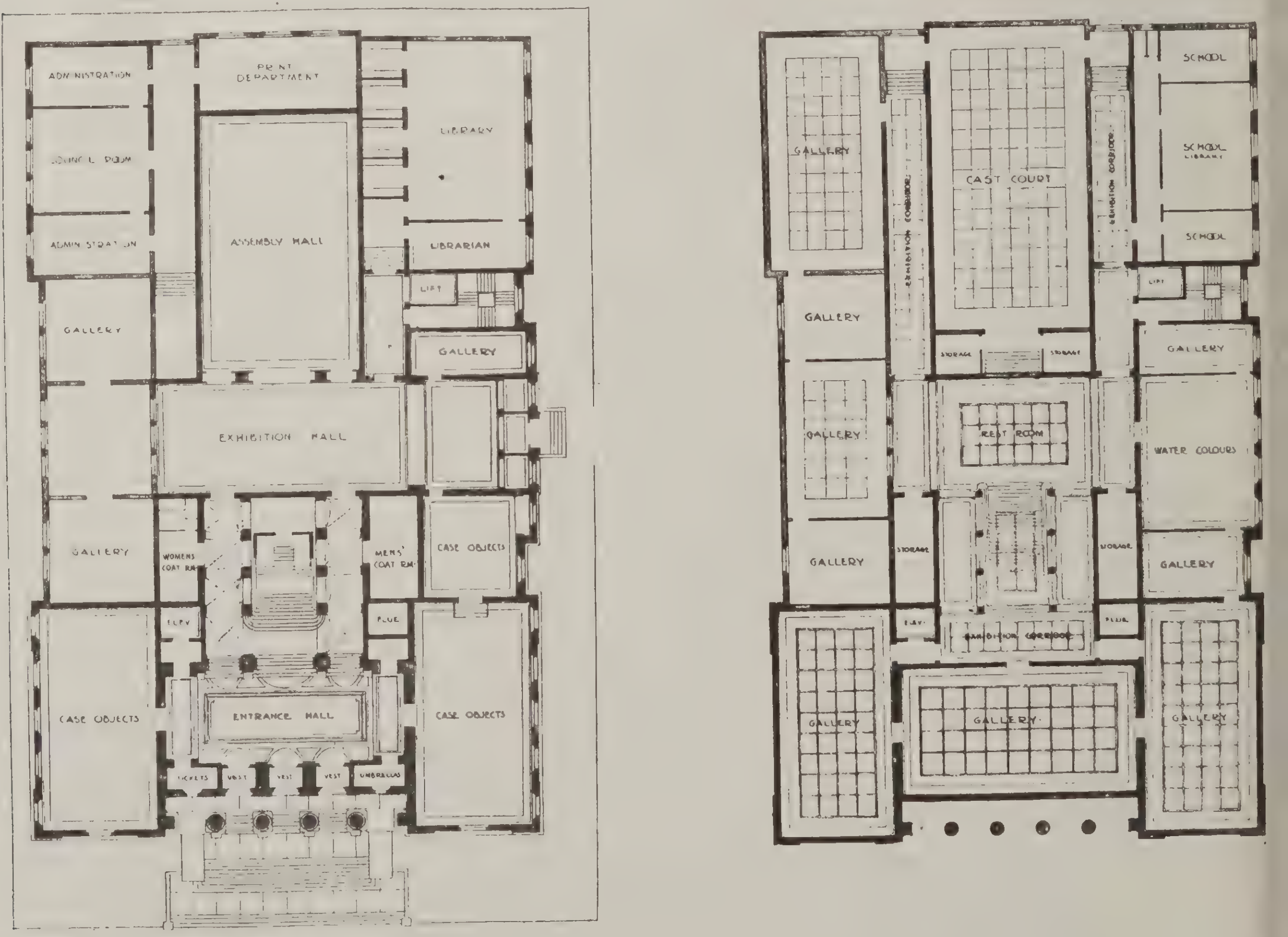
It is of interest to note that one can make the circuit of the six galleries and hallways on the main exhibition floor without retracing one's steps. There is, therefore, always a new note of interest in going from one gallery to another, that one misses in a less skilfully planned structure. The apartments for teaching are very complete, consisting of three large side and top-lighted studios, cast room, modelling room, lunch, and other rooms.

In connection with the new Gallery, it is opportune to recall a few facts in connection with the Art Association of Montreal to which its accomplishment is due. The Association was founded in 1849, but was not incorporated till 1860. Its first President was the Right Rev. Bishop Fulford, and the objects of the Association were stated to be the encouragement of art, the establishment of properly equipped schools, etc. The Association was empowered in the usual way to acquire and sell property, and the constitution and by-laws were drawn up defining the mode in which the business of the Association was to be carried on. Having so formulated their position, matters began to improve and interest in art became more widely spread, but the cost of maintaining the institution still had to be borne by a small number of citizens, among whom were still some of the earnest men through whose incentive the movement was first started. No municipal or Government aid was given and no financ
encouragement whatever was received by them, th
only reward being that they were furthering the cu
ture of their fellow-citizens, and filling thereby a gre
want in the life of the community.

Among these men was the founder of the prese
Art Association, Mr. Benaiah Gibb. His great servic
to the Association and to Montreal generally a
summarised as follows on the bronze tablet
the hall of the gallery in Phillips Square: "Th
Art Gallery owes its existence to the liberali
of Benaiah Gibb, Esq., who died in this ci
on June 1st, 1877. By his will he devised a
bequeathed to the Art Association the land on whi
this building stands; $8,000 in money; over ninety
paintings, and eight valuable bronzes. This Assoc
tion has placed this tablet here in honour of the don
and as a small token of respect and gratitude to hi
and to aid in perpetuating the memory of his gen
rosity and public spirit—1881."

This bequest gave a home to the Association a
some important pictures with which to commence th
collections. Upon receipt of this bequest the Coun
proceeded immediately to the erection of what is call
the "Old Gallery," with rooms and shops below, a
by aid of private subscriptions and this bequest we
enabled to complete the building, which was open
on May 26th, 1879, by the Marquis of Lorne, th
Governor-General, and Her Royal Highness Prince
Louise.

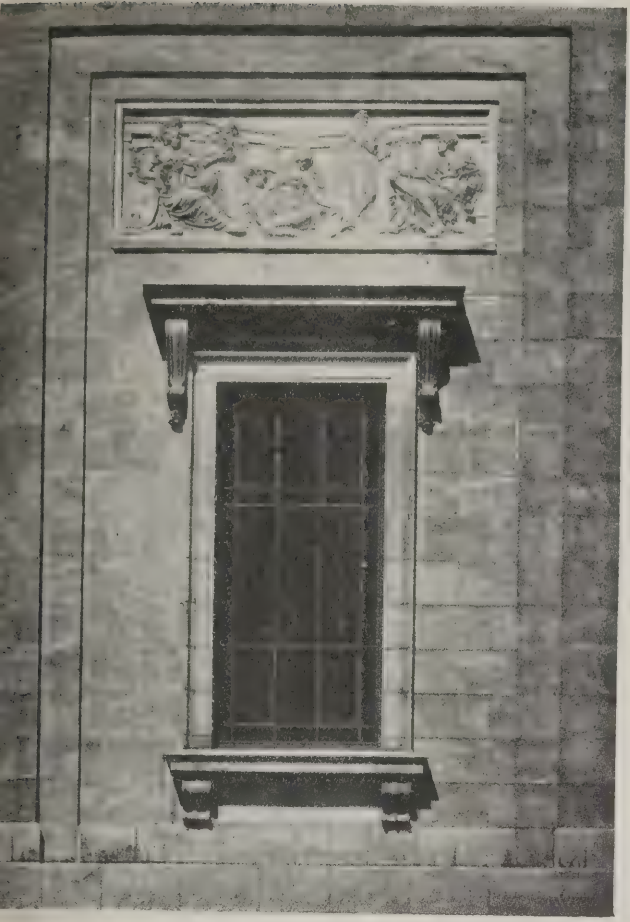
The year 1893 saw the completion of an addition
the Old Gallery, containing a fine picture gallery, co
modious rooms for the Antique and Life Classes, a
a library and reading-room built entirely by priv
subscription. This portion of the building in Phill



Ground-Floor Plan. First-Floor Plan.

THE NEW ART GALLERY, MONTREAL: GROUND AND FIRST-FLOOR PLANS.

EDWARD AND W. S. MAXWELL, ARCHITECTS.



IE NEW ART GALLERY, MONTREAL: DETAIL OF WINDOW.

quare was formally opened on November 29th, 1893,
His Excellency the Earl of Aberdeen, who in his
ldress emphasised the need of such an organisation
the Art Association, and referred gratefully to the
rvices of the public-spirited citizens to whose efforts
e erection of the building was due; and he also
lled attention to the need of such an organisation
the Association—especially in a country like Canada,
here the demands upon the energy and enterprise of
e people make it difficult for them to find time for the
velopment of other departments of national life—
d he concluded by expressing his hope for the
owth of a Canadian School of Art, of which germs
ere already seen.

The completion of this building gave a new impetus
the Art School, which was then in charge of William
ymner, R.C.A., now President of the Royal
anadian Academy. From that time on the attend-
ce in the schools increased, and it annually instructs
arge number of students in the most modern prin-
les of art in oil painting, drawing, from life and cast,
d in modelling.

In 1892 Mr. John W. Tempest gave a large and
luable collection of paintings, and a considerable
quest of money for the purpose of purchasing paint-
gs. Later in 1909 a magnificent collection was
eived from the executors of the late William, John,
l Agnes Learmont, which entirely fills the new
llery, and contains many most important paintings.

The interior of the building provides accommoda-
n for the existing collections of pictures, objects of
, etc., and for future expansion. Its exterior is of
ite marble from the Dorset Quarries in Vermont.
no case have the practical features, such as win-
ws, doors, etc., been sacrificed to obtain an effect
ich did not correspond with the interior require-
nts. The style may, therefore, be called "Classic," adapted to fit the complicated requirements of a modern building, and it therefore adds yet another to the innumerable striking instances of the adaptability of Classic details and principles to modern circumstances.

The Sherbrooke Street front has a recessed portico approach by a broad flight of granite steps. The monolithic columns are of the Ionic order, and are said to be the largest shafts quarried so far in this material in America, the length from base to capital being slightly over 31 ft. The flanking pavilions express galleries on the inside, the ground floor ones being lighted by large windows set six feet from the floor, the lintels being close to the ceiling. The proportions and the placing of all windows, it may be added, are based upon a series of experiments carried out in Boston, the details of mouldings and carving being particular to this building.

The main entrance to the building is through the three arched portals into small vestibules and thence into the large vaulted entrance hall, which is 62 ft. by 24 ft. 6 in. The walls of this hall are of Botticino marble from Italy, the vaulted ceiling being of plaster. Continuing across this hall one comes to a broad flight of marble steps, with ample landings leading direct to the first floor, at either side of the staircase are vaulted passages leading to the large transverse exhibition hall, beyond which is a large top-lighted gallery, which will be used for lectures and exhibitions. Returning to the entrance hall one finds to the right a large room, 31 ft. by 62 ft., which will be used for a library. On the west of the building is a gallery of similar size, which will receive case objects. Ample provision is provided at either side of the main staircase for a ladies' coat room and a men's coat room—a term that in America seems to be superseding our "cloak-room," which has acquired a supplementary significance, and is therefore in need of revision, marking the distinction between such rooms as are here intended and those of a character with which railway stations have made us familiar.

A separate entrance is provided on Ontario Avenue, entering through a vestibule into the Exhibition hall. Adjoining these entrances is the council room and secretary's office, and on the opposite side a staircase leading to the first floor and thence to the Art School. The first floor is devoted almost altogether to the top-lighted picture galleries.

Ascending the main staircase one arrives in a top-lighted exhibition hall, 66 ft. by 29 ft. in. This hall breaks the circuit of the picture galleries. The main gallery facing Sherbrooke Street is reached by passing around the staircase-well through exhibition passages 12 ft. wide, having on the well side columns of Botticino marble, with bronze caps and bases and a wrought bronze handrail, and on the opposite side plain walls for exhibition purposes. The main picture gallery is 63 ft. by 33 ft., top lighted.

Adjoining and on the west is another picture gallery, 31 ft. by 60 ft. 6 in., top lighted, and in a corresponding position to the east is a similar picture gallery. On Ontario Avenue there are three side-lighted galleries for the exhibition of special paintings, water-colours, etc.; the balance of the floor is taken up with storage spaces, elevators, etc.

The top floor contains the Art School facing Ontario Avenue. There are three large studios provided and the necessary accessories. The basement contains the modelling room for the Art School, quarters for the caretaker, lavatories, ample storage spaces, and boiler room, etc. The general furnishings are of a simple dignity characteristic of the building itself. The architects of the Gallery were Messrs. Edward and W. S. Maxwell.

We are indebted for the material of this article to our Canadian contemporary, "Construction."

HERE AND THERE.

THE "movies"—as the Americans call them—may now be said to have fairly captivated the architectural profession. It was a very jolly entertainment that we all had in Tufton Street the other night, when the films which had been prepared by Messrs. Ruffell under the direction of the Architectural Association were shown for the first time. Some time ago I referred in these columns to the great possibilities of the kinematograph as a means of giving instruction in connection with architectural and building schools, and I was therefore a particularly interested spectator on the occasion in question. The films were a brilliant success in every respect. They were extremely steady and clear, and they illustrated typical operations in architectural and building work in a manner that delighted everyone present. I should like to tender my hearty congratulations to the Architectural Association on their enterprise, which now only wants the support of the architectural schools and technical institutes throughout the country to make the scheme a complete success.

First we were taken to Daneshill, near Basingstoke, where Mr. Hoare's works, started in connection with the manufacture of bricks for Mr. Lutyens, have developed on a large scale. Next we were shown one of Messrs. Marshall Mackenzie's detail drawings of the façade of the Australian Commonwealth building, now being erected in the Strand, and, having had one of the arch stones indicated, we were taken away to Portland, and there, in the depths of the quarry, saw the stone got from a 9 ft. seam of whitbed, hauled up to the surface, scaled, and dressed. Then came the working of the stone, and finally its putting into place in the building.

Reinforced concrete was the next matter for consideration, the manufacture of a Considère pile being shown from start to finish. It was quite fascinating to watch the workmen winding on the spiral binding which prevents the pile from bursting when being driven; and the neat way in which the shoe was put on, and the finished skeleton laid to rest in its form, prior to being rammed, was all followed with the keenest interest.

Joinery was our next consideration, the manufacture of a hardwood door at Messrs. Elliott's works at Reading being shown in detail. This film was not so interesting as some others, for the reason that the operations in joinery do not lend themselves so well to kinematographic representation, but the film incidentally was a source of considerable amusement on account of the rapidity with which the joiners worked. It may be explained that each film occupies about half-an-hour in showing, and as on the evening in question there was not time to give the whole film in every case, certain portions were eliminated, and the instrument was worked at a higher speed than ordinarily; the result being of course that men hammered in beadings, with an ease and rapidity that would have gladdened the heart of any hustler.

The film showing the making of one of the ceilings for the "Aquitania" in Messrs. George Jackson's shops was particularly good. The text-books have described all the processes of plasterwork in detail, but this film was worth a whole chapter of description; it was indeed exceptionally interesting, and I have no doubt that similar interest attaches to the film showing the manufacture of a "Kleine" floor, which, owing to the lateness of the hour, it was not possible to exhibit on this "first night" at the A.A.

Altogether it was a remarkably successful evening, and the value of the films was greatly enhanced by the special lecturers, who gave explanatory information as the pictures were being shown. Great expense and trouble have been incurred in the production these films, and I hope that Messrs. Ruffell (who address is 8 and 9, Long Acre, W.C.) will get goo support. The films can either be hired or boug outright. The latter course seems to be u doubtedly the better one. Every architectur school and technical institute throughout t country should be equipped with a kinematogra machine in order that films of this kind may be show as part and parcel of the educational system. This course cannot be considered as in any way supplanti the visits to works and buildings in progress, but it ce tainly should prove an immense boon.

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The "Architectural Review" is to have a spec section in its April issue dealing with the architectu of the liner. This should be of peculiar intere for the reason that although architects have be taking an ever-increasing share in the equipment a decoration of the huge vessels that now traverse t seas, there has never been any comprehensive repr sentation of their work. Those who have not been such vessels as the Lusitania, the Imperator, or t Alsatian will surely marvel at the work that is n being done on board ship. The East Indiam were equipped in a most creditable fashion, while t sterns of the picturesque old fighting ships remind that architectural design was not considered ap from pure constructional engineering in days of yo Later came what may be regarded as a sort of interre num, the shipbuilders still carrying out all the inter fittings, but doing it very badly—from the point view of design (however admirably everything w put together—and, without question, no joine or other work can be found to excel what is do in shipbuilding yards). Then followed the tentat introduction of the architect. I believe Mr. Norm Shaw was concerned with one of the White S ships, while Mr. Collcutt did work for the P. a O., and the late Mr. Flockhart for the Union Cas and other lines. Mr. Prentice and Mr. Robert Wh carried out ships for the Orient Line, and Mr. Geo Crawley has done some excellent work for the C.P. while Messrs. Willink and Thicknesse have done a are doing work for the Cunard Company. For latter, too, Mr. Frank Atkinson is now engaged o new liner. For the architectural decoration of Lusitania Mr. James Miller was responsible, and Peto for the Mauretania, while Mr. Charles Mèw either in company with Mr. Davies as his coadjutor England or with Herr Bischoff as his colleague Germany, has done some of the largest ships for Hamburg-America and Cunard lines. including latest and biggest ship of all. The Aquitania, fr all accounts, will quite eclipse anything that has been accomplished, for, not only have the archite (Messrs. Mèwes and Davis) designed all the archit tural woodwork, but they have also directed the co plete equipment of the vessel, down to the selection table cutlery. This ship, moreover, will reach a s higher level of luxury and elegance by having genu antiques as part of its decoration. In this way the American will find in the very surroundings of ship a sort of visual preface to the art of Euro Bunks, of course, have gone long ago, bedste being now in general use, and similarly the l saloon table has been replaced by the separate tab of the hotel restaurant. But most astonishing of are the sash windows which have taken the place of old ports, while garden verandahs, swimming ba gymnasiums, and racquet courts help further to dis the idea that the voyager is on board ship at all.

UBIQUE

THE PLATES.

innesota State Capitol. Cass Gilbert, Architect.

is perhaps hardly necessary to remind our readers that Mr. Cass Gilbert is the architect of the Woolworth office building, New York—"the highest ding in the world." But this was only one, and bably the least artistic, effort of his very versatile ius. Without any pronounced predilection for any historical style, Mr. Gilbert takes what he can from relying on his instinct for the appropriate to make best possible use of each. Thus the Minnesota itol, which we give as a plate, is an essay in Italian aissance, restrained, yet picturesque and personal s note. It should be compared with some of his gns for skyscrapers or exuberant exhibition ces.

mbre des Députés, Paris: Salle des Conférences. Jules de Joly, Architect.

brief sketch of the Chambre des Députés was n in our last issue. The hall, with fluted Corinthian mns, which we give as a plate, combines with its ties of ornament the vigour of a really living struc-

srs. Colnaghi and Obach's Galleries, New Bond reet, London: Chimney-piece in Hall. Lan- ester and Rickards, FF.R.I.B.A., Architects.

e have already dealt with Messrs. Colnaghi and ch's galleries, as providing one of the most notable fronts in London. The chimney-piece given in late is a consistently decorous and artistic piece of . The hall, which is narrow in comparison with ngth, is finely panelled in walnut.

mpiègne: Galerie des Fêtes. Jacques-Ange Gabriel, Architect.

e splendours of Compiègne Palace have already noted in the Journal, and the Galerie des Fêtes is of the most sumptuous of its sumptuous apart- s. The panelled dome of the roof is a noteworthy ire, and the frieze a singularly happy detail of the rative scheme.

ingham's Designs for Ironwork: Fanlights, mps, Spear Heads, Piers for Fences, and namental Details.

r plate helps to prove that Cottingham's genius ssimilating and applying the principles of Classic and ornament was almost unlimited. Here is a variety of subjects for design, on each of which he in the result, left the impress of Classic feeling; ach, by itself, is an individual work of art. His affords notable support to the theory that Classic iples are capable of universal application.

Student's Drawing: Design for a Building Commemorating the Universal Adoption of the Greenwich Meridian. By B. A. Miller.

Mr. Miller's is one of the excellent detailed drawings which the R.I.B.A. Problems in Design have recently called forth. Mr. Miller is a member of the Liverpool School of Architecture.

New York Court-house Competition: Outline Perspectives of Six Leading Designs.

The Perspectives in this plate are associated with six of the best-known names in architecture in the United States. The design unanimously approved by the assessors (Messrs. R. S. Peabody, Frank Miles Day, and John Lawrence Mauran) was Mr. Guy Lowell's; but, unfortunately, this is not to be carried out, a modification of another competitor's design having been substituted for it. New York scores over ourselves by reason of its open block plan. Whereas our buildings are mostly façade designs, theirs take the nobler form of isolated monuments. The problem here was to provide a building for a triangular site, and for this purpose Mr. Lowell's circular building was most admirably fitted. But the chief lesson of this design and of those accompanying it, is that they show the composition in mass; and they help to emphasise the necessity in tall buildings on island sites of making this the dominant idea.

CORRESPONDENCE.

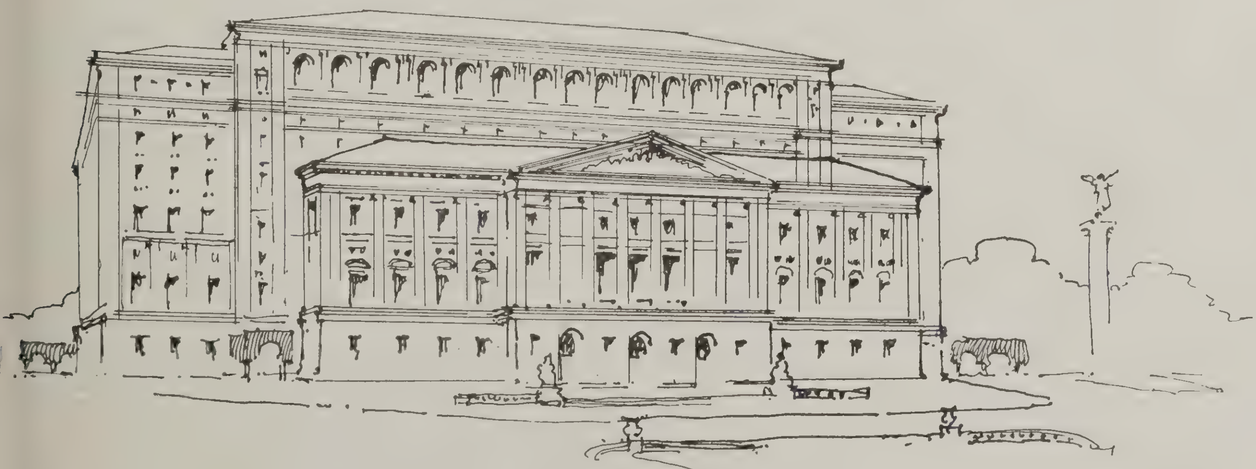
Superintending Architect, Nigeria.

To the Editors of THE ARCHITECTS' AND BUILDERS JOURNAL.

SIRS,—In an advertisement which has appeared in the professional journals regarding this appointment candidature was restricted to members of one architectural institution. In the interests of members of other architectural bodies and of unattached architects, I suggested to the Crown Agents for the Colonies that by so narrowing the selection they were inadvertently doing some injustice to other members of the profession. I have received a most courteous reply from the Crown Agents to the effect that the facts to which I drew their attention did not occur to them when issuing the advertisement referred to, and that in any reissue the advertisement will be amended to meet the case. They further intimate that they will in the meantime be pleased to consider applications from any suitable candidates.

I think this information will be of interest to quite a number of architects.

C. MCARTHUR BUTLER, Secretary.



NEW YORK COURT-HOUSE COMPETITION: OUTLINE PERSPECTIVE OF DESIGN BY CARRÈRE AND HASTINGS.

(See Double-page Supplement.)

"THE WONDER OF WORK."

BY JOSEPH PENNELL.

At the opening of his address on "The Wonder of Work," at the Architectural Association, on March 16, Mr. Pennell said that work was the greatest thing in the world, and the artist who best recorded it would be best remembered. Work had always been an inspiration to artists. Painters who sat in their studios hundreds of years after the towers and temples were designed or destroyed had shown what they imagined the towers and the temples looked like. He did not dispute the power or the charm of Cimabue, Giotto, Pintoricchio, Dürer, etc., but the first artist he knew of to see the pictorial possibility of work, the wonder of work, was Rembrandt.

Rembrandt and Work.

"Rembrandt saw that his father's mill was beautiful, and by his renderings of the windmills and the dykes of Holland proved them the great works of his little country, and showed they were pictorial. And he drew, etched, and painted them because he loved their big powerful forms, their splendid sails, the way they lorded the land and kept out the sea. They were for him the Wonder of Work, the wondrous works of his time, the works that were all about him. So strong and so powerful were these Dutch works that they have lasted till to-day, and so well were they designed that all windmills and watermills have kept their form till now. The working parts have possibly been improved, but the design has not been changed, and Rembrandt's etchings—so accurately drawn they would serve as working models—prove it. And yet Rembrandt has made a perfect artistic composition as well as a true mechanical rendering of these mills and dykes. And as Whistler said in the 'Ten o'Clock,' the Bible of Art, Rembrandt regretted not that the Jews of the Ghetto were not Greeks, nor—may I add?—did he regret the windmills were not temples."

Claude and Canaletto followed. Piranesi discovered the prisons, the Carceri, to be as enthralling as the ruins of Rome.

"Turner imitated Claude. Claude saw his subjects about him; Turner used Claude's motives and tried to rival his predecessor. Claude painted what he saw in his own time; Turner tried to reconstruct his unconscious rival's facts out of his head, and failed even in his rendering of work about him, signally in 'Steam, Rain, Speed,' where an impossible engine conducts itself in an incredible fashion in a magnificent landscape. Turner was not here trying to carry on tradition—the only thing worth doing in art—but to *embêter les bourgeois*.

"Turner's Carthage would not stand up if built—Claude's palaces do. Turner, too, defying Ruskin—Ruskin anathematising workaday England—was a spectacle. But Turner was sometimes in the right, with Constable and Crome, and they, and not Ruskin, have triumphed. Turner had magnificent ideas, wonderful colour sense, grand composition; but when he came to fact he was often ridiculous or pitiful, simply because he had not observed work, noted facts—and to paint work one must study work.

"It is far easier to paint a heavenly host or a dream city in one's studio than to make a decoration out of a group of miners, or to draw a rolling mill in full blast. Yet one of these subjects can be as noble as the other, as Whistler proved, when he showed for the first time how, in London, 'the poor buildings lose themselves in the dim sky, and the tall chimneys become campanile, and the warehouses are palaces in the night, and the whole city hangs in the heavens and fairyland is before us.' That is the Gospel of the Wonder of Work.

"Though I never studied under Whistler—never was his pupil—he is and always will be my master—the master of the modern world, the master who will endure. Because he glorified the things about him, the things he knew, by 'The Science of the Beautiful.' What are the Thames etchings—'Wapping,' 'The Last of Old Westminster,' 'The Nocturnes'—but records of work? A fact most critics have never realised. But Whistler was a many-sided—a so many-sided genius that his many essays in many fields are only just becoming known, and this study of work—the most difficult study in the world, under the most trying conditions—was never abandoned by him till he said what he wanted, in the ways he wanted, not till he had made a series of masterpieces which live and will live for ever."

Meunier.

The lecturer went on to speak of Constantin Meunier.

"Meunier showed without sentiment the workman at work, not with any idea of preaching about his wrongs, his trials, his struggles, his misery, but to show the Wonder of Work for its own sake, and the pictorial possibilities of workmen and workwomen in Belgium. Meunier showed that the workman was worthy of the artist's chisel, chalk, needle, and paint. There is no sentiment about Meunier; there is grandeur, dignity, and power, and from him we have learned that modern work is wonderful. Meunier was an old man when, a few years, ago, I first heard of him and saw his work. He had then done his heroic 'Antwerp' and his puddlers and miners in bronze, his paintings, and his chalk drawings, his decorations, his great apse for the unbuilt basilica—the monument to modern work and workers. His work is decorative because it is true, and this brings up another side of the Wonder of Work. In France, Germany, and Italy the Wonder of Work around us has been made the subject of endless commissions from the State to artists mostly realistic. But records of facts, facts of one's own time, here and in America, are scarcely ever recorded. Go to the Royal Exchange and you will find Wat Tyler, Phœnicians, Britons painted blue, and everything in the history of London that can be made into a painting of the past, and not a single record of the present. Where is the building of the Tower Bridge, the electric light works, the docks, the Blackwall Tunnel, the trams, the tube, or any of the other works by which this age, this workaday age, has distinguished itself, all of which are worth painting? In America we have imaginings of Holy Grails, Pied Pipers, Religious Liberties, when one fact in decoration about steelworks, skyscrapers, or the Brooklyn Bridge would be worth the lot in the future, when these tactless fancies are whitewashed out, or made a good ground to paint on. In France men like Henri Martin have painted decoratively, yet realistically, the harvest of last summer; Besnard and Anquetin have done wonders; and Puvis de Chavannes, first of all, magnificently showed the way to combine the old decoration with the new realism. His life-work at Amiens is pure convention, so are his designs in the Boston Public Library, and in the Sorbonne, but they are the most perfe
amples of decorative, imaginative, co
tional work in the modern world.

"And here John Lavery has ma
Glasgow, a decoration out of shipbu
which is worth the whole wall cov
of the Royal Exchange and the H
of Parliament put together. There
know, the Graves brothers' wor
Streatham—only no Streatham
them; and some others have done t
in South London, which are scarce
South London—Anning Bell and V
Crane—but some are amusing. Bu
coration is a difficult matter, and L
has done much for Glasgow.

"From the very beginning I have
for the Wonder of Work; from the
I built cities of blocks and sailed n
of ships to them across the floor i
father's office, till I went to the Pa
Canal, I have cared for the Won
Work. There are others who
Brangwyn has cared, and so have Sa
Muirhead Bone, Strang, and Short.
Cameron, Bone, and Brangwyn
cared for the building up and the bre
down, and Brangwyn for life—the l
the workman, possibly because of hi
gian and seafaring education or his l
ledge of Meunier, his countryman.
there are Belgians like Baertsoen
Frenchmen like Lepère, Gillot, and A
and Italians like Pieretto Branco, ar
great German Menzel."

Speaking of America, Mr. Pennell
tioned the art of Seymour Haden, V
Alden Weir, and others. He dr
finely impressionistic word picture of
York. You land in streets tha
Florence glorified. You emerge in sc
more noble than Seville. Golden s
are about you, triumphal arches
splendid frames for endless vistas;
is all new and all untouched, all
done, and save for the work of a f
us, and we are Americans, all un
The Unbelievable City, the city tha
been built since I grew up, the city b
ful, built by men I know, built for
I know, the city that inspires me, t
love.

Pennell at Panama.

Then followed a description of his
to Panama, which has provided him
subjects for several striking lithogra

"I went to Panama because I be
that in the making of the greatest w
modern time I should find my greate
spiration.

"The day I landed in Colon I fou
I had seen great cranes at Pittsburg
Duisberg, but nothing like that
stretched its great arm, with great
over the sad, silent swamp of Mount
—the end of De Lesseps's dream.
seen in New York, as I sat on the thi
story of the Metropolitan Building, a
come up from below with a man cli
to it. But I had never imagined any
like the group of figures which rose
Gatun Lock at dinner-time. I had l
into chasms and gulfs, but I
imagined anything so terrific as the
of Pedro Miguel. I had seen the gr
walls of the oldest cities, but I
imagined anything so imposing a
walls of Miraflores Lock. I had see
great aqueducts and great arches o
world, but I never imagined anythin
the approaches to Gatun and the spri
Pedro Miguel, made by army officer
civil engineers mainly to save mat
For there are no architects, no desig
no decorators on the Panama Canal-
engineers and organisers—Goethals,
lard, Gorgas, Williamson, Bishop,
more. But the engineers at Panam

ıt designers, and great work is great
ıration.

Almost before I left the canal, artists,
ıitects, and decorators were on their
there. I hope it may interest them
as much as it interested me.

On the canal I found the subjects I
ted—subjects I shall never find again
ıd it will always be a delight to me
I went—went on my own initiative
not at anyone's bidding. I shall pro-
y never see the canal again, but I have
it and drawn it as well as I could,
I am glad I went, for it is the most
derful Wonder of Work in the world.

We have recently been told that art
disappear in fifty years (by a person
says he will call his last book—with
ible appropriateness—' Vale '). But,
gh he will disappear, and Post-Im-
sionism will be swallowed up in shop-
ing, and though the mustard pot has
with the soulful doggie, and the tear-
baby rival of the Dresden Madonna,
ırtist who has something to say in his
way about his own time, and can say
ill live, and his work will live, with
brandt, Velasquez, Franz Hals,
nier, and Whistler—artists who
ted and drew the work and life about
ı, carrying on tradition, and never re-
ed the past. And art which shows
ınd work will never die, for such art
verlasting, undying—' The Science of
Beautiful.' "

Discussion.

. Frank L. Emanuel, proposing a
of thanks, said he thought if one were
d to produce a symbolical figure of the
der of Work one could not do better
do a faithful portrait of Joseph Pen-
His tireless energy in producing a
stupendous output of consistently
tiful works of art constituted him an
tural phenomenon. When one con-
ed still further his books and lectures
l of knowledge and research—one
elled still more. In the course of his
re, continued Mr. Emanuel, Mr. Pen-
said that Turner imitated Claude; but
was a single item in a very crowded
ndependent career. Turner certainly
e period set out to try to beat Claude
is own lines, but had these experi-
s never been made there was enough
f entirely original effort to constitute
er a giant, and an inventive one at
He was inclined to agree with Mr.
ell in his strictures on Turner's rail-
engine, though one must not forget
they were very funny things in those
Mr. Pennell cast a stone at
er's drawing of architecture, but his
tectural work was built on splendid
lations, and it would take an
nche of stones to overthrow it. He
d conclude his few remarks with one
ı Ruskin made to him. Ruskin was
enough to take an interest in his
ful efforts, and he (the speaker) was
ng him a water-colour of distant
ay Castle enveloped in a purple
w. As a foil thereto he had painted
aw-coloured saw-mill in the fore-
d. Ruskin said: "Young man,
depict any building that is less than
ears old."

G. A. Adams seconded the vote of
s, and dwelt upon the love of
nity shown in Mr. Pennell's draw-
He had a book of Mr. Pennell's
d "From Ludgate Circus to
ng Cross," containing a delightful
entation of the types of London life.
ennell brought us up to the teeming
ıt and showed us its great oppor-
es.

Mr. H. M. Fletcher admitted that architects had a great admiration for the work of engineers when they treated things in a simple and direct way without trying to be architectural.

Mr. V. A. Flower said that Mr. Pennell jumped from the Assyrians to Rembrandt—from the twelfth to the fifteenth century—without taking account of the intervening period. He drew his attention to the representations of contemporary building operations to be found in the "Nuremberg Chronicle" and in the illustrated missals in the British Museum.

Mr. W. Curtis Green said Mr. Pennell always loved the romantic side of his work. He (the speaker), in his younger days, had been led on an arduous journey in Normandy to see a building which Mr. Pennell had sketched for a guide book. Well, he had got over the disappointment.

Mr. Pennell, in reply, maintained that Turner could not draw architecture. He had probably made more blunders to the square inch than anybody else.

THE ARTIST AND HIS ART.

BY PROFESSOR C. H. REILLY, M.A., F.R.I.B.A.

Mr. C. H. Reilly, Roscoe Professor of Architecture at the Liverpool University, distributing prizes on the evening of March 13, at the Leeds School of Art, said he once asked Augustus John what he would do if he were founding a school of art with unlimited means at his disposal. His reply came at once: "I should endow the model and do nothing else." No one had made so many life studies as Mr. John, and no one had achieved a more individual and perfect mode of expression. They were therefore not to think that labour was not necessary even to genius. Incessant practice in the perfecting of technique was necessary to every one. . . . The painter and sculptor needed endless familiarity with the human form before that form could become for them a medium for freely expressing their own emotions. Action, construction, and proportion could all be taught and demonstrated, or learnt from other students. But the resultant drawing, however exact, was of little value until you yourself, out of your own personality, had added character and significance.

The latest definition of art—Mr. Clive Bell's—was that art was the creation of significant form—a very good definition. If the forms you made had no real significance to you who made them—if you had not felt them intensely—what significance would they have to the beholder? Unless your picture had raised a white hot emotion in you in its making, it would raise no emotion in anyone else. Why was it that we felt the ordinary Academy picture was such a dead thing? The reason was, he thought, that one could not bring oneself to believe that these problems in card-sharping, these slick portraits of happy mayors or unhappy politicians—(laughter)—these anecdotes with a tag of poetry, had been felt intensely. No white heat had gone to the making of them; rather had they been conceived with an eye to their purchase by some sentimental committee in the provinces, or for reproduction in the Christmas numbers of the illustrated papers. He hoped the very elaborate organisation of that school gave plenty of time for play. (Cheers from the students.) He hoped they caricatured each other and their masters on the walls of their life room. (More cheers.) He hoped they had plenty of dances—and always in fancy dress. (Laughter.) He hoped when Leeds founded its repertory theatre they would be its chief patrons, and its most intelligent critics. Art and joy always went together. Professor Reilly continued: "The University professor may be admitted to be a dull person—in my experience he often is—(laughter)—but the artist—never. I do not mean, however, that you must be all bustling energy and vivacity. The American nation is not characterised by a large proportion of artists among its bustling population. I mean that you must cultivate sensitiveness, be open to impressions. Every scene is grist to the mill of the real artist. He sees through vulgarity into human nature, he sees the meanness lurking in all snobbishness. Despise nothing, only try to understand.

"We live in a time of artistic revolutions. Taste is changing at a great rate. A few years ago Mr. John was thought a revolutionary; to-day he is accepted as a conservative. His mode of expression has been grasped and appreciated by nearly every one. But there are modes against which most of us stumble, and towards these I would suggest you should try to keep an open mind, all the time perfecting your power of drawing in the ordinary sense. The more directly you can state facts, the easier it will be for you to eliminate unnecessary accessories and to simplify your drawing. . . . I hope the authorities of your school, realising what is happening in the world of art outside, will not tie you too tightly to old-fashioned methods of finish in order that you may earn a larger grant from the strange despots who rain influence and judge the prizes at South Kensington. (Applause.) Leeds is a great city with its independent industries, its independent University, and, I hope, its independent School of Art. We in the provinces have too long accepted the provincial position which London has dictated to us. (Hear, hear.) The average person in a town like Leeds or Liverpool has really the opportunity for a much fuller and more varied life than the same person would have in London. It is much easier in the smaller town to be in touch with a variety of activities, and to know a variety of persons. The London suburbs where the masses of Londoners live are the real provinces. If this is so, is there not every chance of developing in Leeds and Liverpool local schools of architecture, painting, and sculpture, in the real sense of the word 'school'? Even in London artists feel the necessity of forming themselves into groups with kindred aims—the new English Club, the Camden Town group, the London group, and the Society of Twelve. Liverpool, in the same way, has its Sandon Society, and the ambition of the Leeds school should be something similar. What, however, is necessary is perfect freedom, and if your teachers find that the South Kensington rules and competitions curtail this freedom Leeds should be strong enough either to free its school from Government grants or to dictate to the Government the terms on which it is willing to accept such grants." (Applause.)

A New Colonial Allied Society.

At the general meeting of the Royal Institute of British Architects on March 9 the Chairman announced that the Council, acting under By-law 78, had admitted the Queensland Institute of Architects to alliance with the Royal Institute.

SPECIAL LEGAL REPORTS.

Constructing a Building Agreement : Important Judgment.

Hurlstone v. London Electric Railway Company and Dunkley.

March 13. Court of Appeal. Before the Lord Chief Justice and Lords Justices Swinfen Eady and Phillimore.

An interesting question on the construction of a building agreement came before the Court on the appeal by the London Electric Railway Company and Mr. Dunkley, builder, from a decision of Mr. Justice Scrutton in the King's Bench Division in favour of Miss Florence Hurlstone.

Mr. Rosskill, K.C., appearing for the appellants, said the Electric Railway Company agreed with Mr. Dunkley that he should erect a building on the top of the entrance to their tube station in Cranbourn Street, W. During the operations a piece of wood fell on the head of a lady who was walking on the pavement and who received injuries which a jury found were due to the negligence of the builder and the railway company, and the jury awarded her £75 damages against both defendants. Mr. Dunkley did not defend the action, and counsel for the lady said he particularly wanted a verdict against the company. The whole question before the Court was whether, on the agreement, the railway company could be held liable for the negligence of the builder, and whether there was a relationship between the parties such as that of landlord and tenant, lessor and lessee, or principal and agent.

Mr. Clavell Salter argued that the judgment was right on the grounds he had mentioned. He said there was evidence that the company retained occupation of the building and had it erected under the supervision of their own representatives. The agreement was such that they could not reject any suggestion of responsibility on their part. They had engaged with a builder to erect a building which, as it was on the edge of the highway, could be called a dangerous building. They promised him a payment in cash and a lease for a number of years. On the face of the agreement they remained the owners in occupation, and therefore were liable for negligence.

Delivering his judgment, the Lord Chief Justice said the case presented by the plaintiff was that although the Electric Railway Company were not engaged in the actual building operations, and although it could not be said that they had directly caused the piece of timber to fall upon the plaintiff, yet by virtue of the building agreement which had been entered into between the company and Dunkley's, Limited, the company must be treated as being liable for Dunkley's negligence. It was also contended that the company could not evade its responsibility, even though it had delegated the work to an independent contractor. The plaintiffs rested their case on the allegation that the company was both owner and occupier of the premises and, therefore, there was a duty cast on them to protect the public using the highway from danger from falling matter by erecting a satisfactory superstructure over the highway. The question which the Court had to consider was whether the facts of the case brought the plaintiff within any of the essential principles of law. The agreement which was before the Court was the ordinary builder's agreement, modified to suit the particular case. The railway company had constructed a ground-floor building and wanted to let the upper part for the purposes of a building. Under the agreement the builder was called the lessee and he was to erect a building according to specifications and plans which were to be approved by the architect and engineer of the company. The lessee was to carry out the whole of the work, subject to the reasonable satisfaction of the architect and engineer, and under clause 3 the lessee forthwith entered into and took complete possession. The lessee agreed that he would not cause any public or private nuisance, and he would erect the building and completely carry out the directions of the company's architect in such a way that the company could reasonably approve of it. No objection would be made by the company to the erection of a gantry and hoisting tackle and a cantilever gantry. Another clause provided that the lessee should be deemed tenant-at-will from the date of the agreement until a lease was granted to the builder for ninety-nine years. The lease was to be granted at a peppercorn rent, payable quarterly, until December 25, 1911, and from that date the yearly rent was to be £500. The latter date had arrived before the accident occurred which caused the lady's injuries. The question resolved itself into this: Could it be said that under the agreement the railway company had not any occupation of the premises? In the agreement exclusive occupation was given to the builders, subject to certain rights to the company of re-entry. Therefore, the occupation was in the lessee and, so far as the railway company were concerned, they were merely reversioners and had no other interest in the property, and no case had been quoted as an authority in support of the contention that reversioners could be held liable for the acts of a lessee. It had been argued that as the railway company had caused the work to be done for their own advantage, that supplied the elements necessary to prove their liability for the accident. In the first place, what was the meaning of the word "caused"? Mr. Salter had said that the company had caused the work to be done because they caused Dunkleys to erect the building. It was perfectly true that when the two parties entered into the agreement they each did so for their own advantage, but that matter did not help the Court at all. In this case there was no duty upon the railway company in respect of the premises of which they were merely the reversioners, and there was no other duty upon them. It was said that in any circumstances the company must protect the public, and they could not get rid of that duty by delegation. The plaintiff, however, had made no submission which successfully established that proposition. Then it had been argued that the company could be attacked because, by the agreement, it had the right to approve the gantry, etc., and was entitled to say on what form it should be erected. The difficulty in the way of the plaintiff was that the only evidence was that the architect of the company had a right to see plans of the gantry, that they were shown to him and he did not object to them, but nowhere could it be found that the company ordered the erection of a gantry of a certain width. Therefore, he (his lordship) thought it could not be argued that the railway company had not freed itself from the responsibility which the plaintiff sought to attach to it, and he decided that the judgment of Mr. Justice Scrutton should be set aside and judgment entered for the railway company, with costs.

Lord Justice Swinfen Eady, conc
said the railway company had not
the work to be done, the causing wa
by the lessee—the builder.

Lord Justice Phillimore agreed, a
appeal was allowed, with costs.

Light and Air Dispute.

Darby and Edmunds v. Townsle
Belton.

March 19. Chancery Division. Before Mr.
Sargant.

This was an action by Charles W
Darby, brewer, of Thorne, and Will
Edmunds, of Prospect Street, Kir
upon-Hull, against James Townsl
Westbourne Avenue, Hull, and Fra
ton, builder, of Wallbeach Street,
claiming relief in respect of an alleg
struction to the light and air coming
King Edward VII. public-house, Kir
upon-Hull, caused by the building
tions of the defendants.

Mr. Martelli, K.C., representi
plaintiffs, said they were respective
owner and occupier of the King E
VII. public-house, and the defe
were the owners and builders of a
public hall, to be called the Met
Hall, which had been recently built
rear of the public-house and on th
side. It was erected in the place o
old buildings, and the plaintiffs, l
suffering from the decrease of light t
public-house, had had their bottling
at the rear damaged by the defe
building operations. The matter wa
serious, as it was calculated to jeo
the plaintiff's licence, because the
ing justices took the lighting int
sideration in deciding whether or
building was suitable for license
poses.

Mr. Dosser, architect, of Hull, a
William Walker, of Hull, architect
diocese of York, gave evidence to the
that the defendant's building would
fere to a serious extent with the ligh
ing to certain of the plaintiffs' wi
They also spoke to cracks that ha
peared in the plaintiffs' building,
their opinion to the defendants' bu
operations.

Mr. Mark Romer, K.C., for the
dants, said it was a little unusual i
class of case to find an unfortunate b
bothered with litigation, but he had
joined as a defendant, and had the
incurred some expense. Defendant
that they had been treated with w
consideration in this case by the pla
Defendants had endeavoured to beh
a neighbourly and proper spirit an
endeavoured to give the plaintiffs,
out litigation, all such relief as they
expect, whether they were legally e
to it or not. Counsel denied any in
ence with the plaintiffs' lights, and
the action the defendants had been w
to make concessions to avoid litigat

His Lordship observed that it ap
that at one time defendants admit
cause of action, but declined to pa
costs. The issue to be tried was, wh
there was a cause of action at the ti
the issue of the writ.

Mr. Peter Gaskell, an architect,
that the defendants' building oper
were part of an extensive scheme of
improvement, and affected a numb
acres. He found the light in the plai
smoke room adequate.

His Lordship came to the concl
that there was, to persons using the
tiffs' smoke-room, some appreciable
ence in the light. Therefore, at the

e writ in the action was issued plaintiffs d a cause of action. Defendants hād ndertaken to make good any damage hich had been done to the bottling stores, d that undertaking was accepted. efendants would have to pay the costs of e action.

BOOK NOTICES.

Baroque Architecture.

It was high time that the Baroque Period d an historian, and Mr. Briggs has apared none too soon, with this comprensive survey of what he in his preface scribes as "a complex and neglected riod." If anything, we feel Mr. Briggs rather too apologetic; his quotation from alter Pater, "In all ages there have en some excellent workmen, and some cellent work done," is too negative for a le which produced some first-rate works exuberant genius. The apologetics of e last chapter are barely necessary; the ne is past when the architectural purist s so afraid for his reputation for good te that he dared not admire any architure of the past except what was ntained in the charmed circle of chosen period. Nor need the fal- be further exploded that a le that one delights in studying one cessarily wishes to reproduce. Very en, indeed, it is exceedingly healthful an architect to recreate himself with ne period entirely apart from his daily nd; so Cockerell refreshed his classily disposed mind with a study of the nography of the west front of Wells thedral. At the present moment, when free version of Neo-Grec is agreed n as expressing most nearly our dern architectural needs, Baroque ms the ideal relaxationary antidote: the ht-hearted way in which its practitioners ng about great masses of building, their ling for the monumental, the essential hitectural quality of their appeal, their y recklessness of detail and entire unacintance with the canons of good taste—these qualities are invaluable for the o-Grec architect, who is inclined to re- himself to a thread, to glue his eyes on detail, and to work within the narrow npass of a few set forms. An interest- contemporary parallel, though inted, is afforded in music. Richard auss, the modern light-hearted countert of Baroque, takes his chief delight in playing of Mozart, the modern Greek music. It is the profoundest error to gine that cold logic produces profound —it merely tends to thin-blooded mia; what is required is a vibrating ness, caused by the blending of incombilities: in this consists the whole difnce between Greek and Roman art.

ut to return to Mr. Briggs's work, ch thus appears most timely, we not but commend the courage which he has attacked so vast subject and compressed it into single volume. Perhaps the only us criticism that could be levelled is work is that he has been so intent n arrangement and grouping of his ect matter and putting it into histo- perspective that he has rather ected the characteristic qualities of style to which we have alluded. Pers the best feature of the work is the r distinction which he draws between que in Italy, where it was a direct re- from pedantry, and Baroque in other tries, where no pedantry had existed volt from. In Germany, for example, Baroque, or over-blown Renaissance imported from Italy, is found cheek-by-jowl with early picturesque German Renaissance. Mr. Briggs's analysis and distinctions in this most involved phase are lucid and masterly.

"Baroque Architecture." By Martin Shaw Briggs. Price 21s. London: T. Fisher Unwin.

IN PARLIAMENT.

(*By Our Press Gallery Representative.*)

The New British Museum Buildings.

During the last week a series of questions has been addressed to the Government with regard to the new buildings of the British Museum and the internal arrangements. Replying to Mr. Bennett-Goldney, Mr. Wedgwood Benn stated that the plans and drawings for the extension were not thrown open to public competition. The architect was selected by the Government in 1904 from a panel of six architects nominated by the Royal Institute of British Architects.

Mr. Bennett-Goldney asked if the actual wall spaces in the upper main gallery of the new buildings were found to be useless for exhibition purposes owing to a series of iron radiators having been fixed along the walls; whether the new exhibition cases were thereby prevented from being placed close to the walls, as they were in the old building; and if the unsightly stains which had already appeared upon the walls above the cases on both sides of the gallery were due to the streams of hot dust-laden air constantly rising from behind these cases.

Mr. Wedgwood Benn said it was considered desirable to place the heating units in the walls, but this did not detract in any way from the usefulness of the gallery. Slight stains had appeared, but it was hoped that when the ventilating system was in action the cause would disappear.

Mr. Charles Price asked the Secretary to the Treasury if his attention had been called to the defective planning and waste of exhibition space in the galleries of the new buildings of the British Museum; and if he would ascertain how many square feet of the superficial area of these galleries was rendered unavailable for exhibition purposes by iron radiators and by the screening, such as the recently added false backing to the print cases in the upper gallery and by the thirty-six square plaster columns in the lower gallery.

Mr. Wedgwood Benn said the architect who designed and planned the extension to the British Museum was selected by H.M. Government in 1904 from a panel of some of the most eminent architects of the day. The First Commissioner could not admit that the planning was defective. The plans had throughout been submitted to and approved by the trustees of the British Museum.

Mr. Bennett-Goldney asked why, if the plans were not defective, a large hole had to be cut in one of the principal floors in order to insert a staircase.

Mr. Wedgwood Benn said another staircase was found to be desirable and the plan was accordingly modified.

Mr. Touche asked the Secretary to the Treasury if he would ascertain whether the Office of Works or a Committee and, if the latter, what Committee sanctioned the style of architecture adopted for the main staircase and each of the great galleries in the new buildings of the British Museum; if he would say whether the Office of Works or a Committee either examined the drawings or approved the order of architecture of the interiors, if any, including the details of the capitals of the black columns in close proximity to the elevator on the uppermost floor; and whether the Office of Works or such Committee had any knowledge before they were built that they would be out of keeping with the well-known Classic features of the old building and thus add to the incongruities of the new.

Mr. Wedgwood Benn said the First Commissioner would remind Mr. Touche that the building had been designed by an architect of great eminence specially chosen. In reply to further questions, he said the present intention was that the gold wash on the walls and ceiling of the main black and white staircase should not be permanent. The radiator between the two terminals of the low white marble walls on the main landing of the principal staircase was a permanent fixture and was designed for its purpose. Statuary would be placed in certain positions on the staircase. The iron radiators in the embrasures of the windows of the galleries would not prevent exhibition cases being fitted so as to obtain the best light. The largest radiator was 4 ft. 10 in. long, 39 in. high, and 9 in. wide.

Mr. Touche asked why the superficial area of the great gallery on the ground floor had been so much curtailed by the insertion of the thirty-six square plaster columns ranged along both sides of the gallery at a certain distance from the walls, which not only impeded the light but cast undesirable shadows in the direction of some of the best spaces left for exhibition purposes, and whether any plans had been prepared for the removal of these obstructions.

Mr. Wedgwood Benn said the columns were part of the structure of the building and their removal was impossible. They were in the original plans. There appeared to be no ground for the statement that undesirable shadows were cast.

OBITUARY.

Mr. Charles P. Ayres.

Many readers will hear with regret of the death of Mr. Charles P. Ayres, which took place at Watford on Tuesday week from heart failure. Mr. Ayres was a well-known architect of the town and district, and designed and superintended the erection of many public buildings, including the workhouse infirmary, isolation hospital, General District Hospital and extension, infirmary and sanatorium of Royal Masonic Schools, Bushey (£13,000), Derby Road Grammar Schools, Watford Girls' Grammar Schools, banks and elementary schools in the town, and the offices of the Colne Valley Waterworks. Mr. Ayres was sixty-three. Before urban councils came into existence he was a member of the old Local Board, served for some years on the U.D.C., and occupied the vice-chair and the chair in 1896-98. He took a prominent part in celebrating the Diamond Jubilee in the town. While on the Council he undertook gratuitously the architectural work of the Fire Brigade Station. For several years he was a member of the Watford Lodge of Freemasons.

Midland Adelphi Hotel, Liverpool.

In this fine new hotel, which was opened last week for the reception of guests, Pudlo, the powder which makes cement waterproof, was used in the cement work.

CONCRETE AND STEEL SECTION.

(MONTHLY.)

NEUTRAL AXIS AND MOMENT OF INERTIA OF REINFORCED CONCRET AND OTHER SECTIONS.

BY F. E. DRURY, F.I.S.E., M.C.I.

(Head of the Department of Building and Structural Engineering, Royal Technical Institute, Salford).

THE meaning and use of the quantity referred to as the "second moment" or "moment of inertia" of a structural member is often more or less obscure in the minds of engineering students, and especially so when referring to irregular sections of one material, or to compound sections of *two* materials as in the case of reinforced concrete.

The following articles attempt to give a clearer view of the value and meaning of the term.

To introduce the basis of the subject, consider the "inertia moment" of a rectangular section of *one* material.

It is usually stated as $\frac{bd^3}{12}$ (inch units), an expression in terms of the dimensions of the section.

We shall proceed to demonstrate its meaning by studying diagrams representing the distribution of stress in an elastic beam subjected to bending.

In Fig. 1, h, j, k, l, is the section of a beam bent until a stress of "f" units has been developed at the extreme fibres, on the assumption that "*the section remains plane after bending*" and "*the value of E. (Young's Modulus) in tension and compression is the same.*"

On the section of the beam a stress diagram has been constructed showing the distribution across the section, the variation of intensity of stress being shown on the face of the beam.

The wedges representing the stress are *not* part of the beam, but *solid figures built on the section.*

By this means it should be clear that the volume of one of these "wedges of stress" represents the total stress on one side of the neutral plane where the nature of the stress changes from tension to compression.

Hence the total stress on one side,

$$F = \text{volume of wedge}$$

$$= \tfrac{1}{2}\left(b.\tfrac{d}{2}.f\right)$$

$$= \frac{bdf}{4}. \qquad \text{(a)}$$

The total compressive stress F. = the total tensile stress F_1, and these form a couple acting in opposition to the bending moment. The moment of this couple must therefore be the volume of one wedge, F, × the distance between the centres of gravity of the two wedges. As these are situated at $\frac{1}{3}.\frac{d}{2}$ from the top and bottom edges the lever arm of the couple F. F_1, = $\frac{2}{3}$d. The moment of the couple is the moment of resistance (M_R) of the beam, therefore

$$M_R = F \times \tfrac{2}{3}d$$

But from (a) $F = \frac{bdf}{4}$

$$\therefore M_R = \frac{bdf}{4} \times \tfrac{2}{3}d$$

$$= \frac{bd^2 f}{6}. \text{ (b), which is the well-}$$

known expression of the M_R of a rectangular section.

Now consider the mathematical method of arriving at the same result.

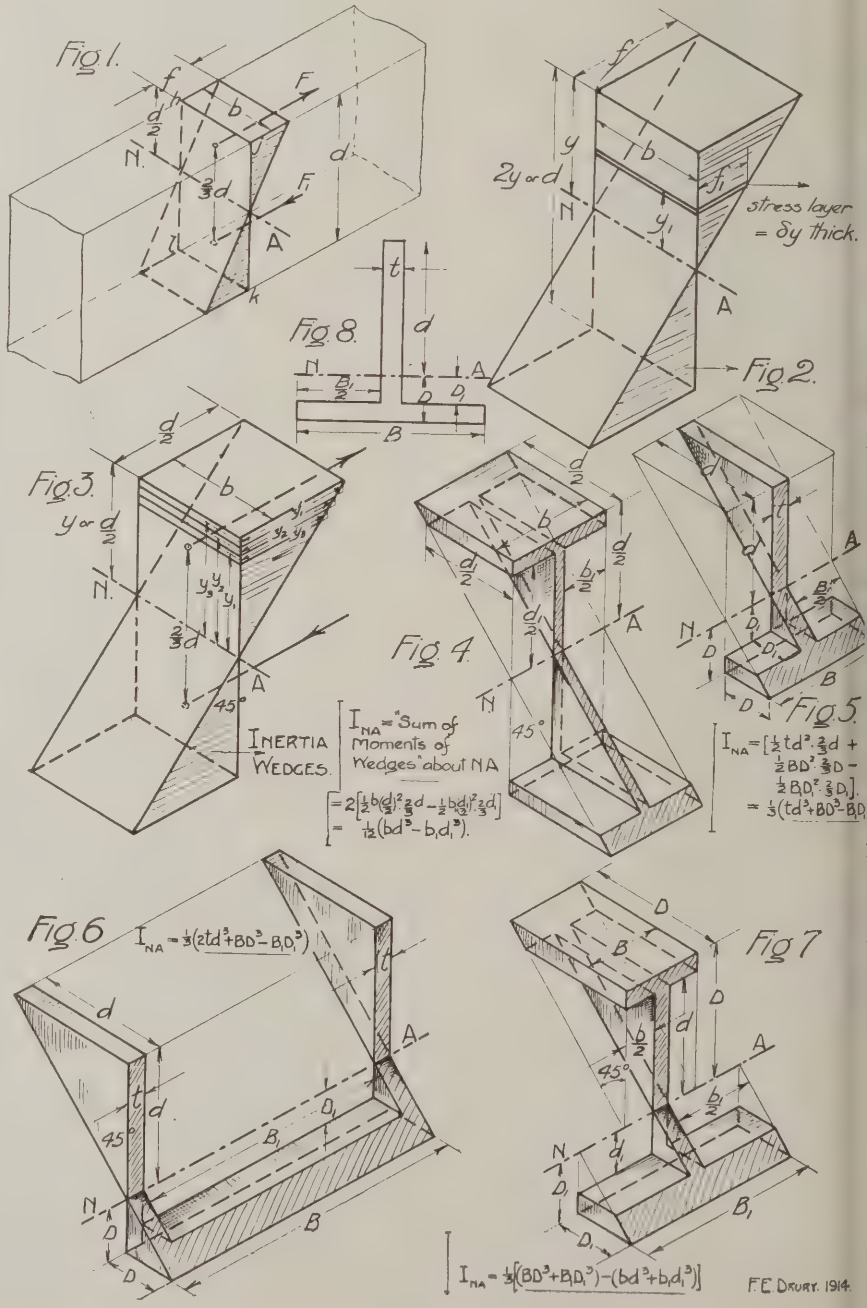
The wedge of stress is composed of a large number of infinitely thin layers of varying length from "o." to "f." such as f_1, each layer being δy units in thickness. Fig. 2.

Now each layer provides its shar the resistance, hence the sum of the sistances (on both sides of the N.A the M_R of the section.

Thus:—M_R = the sum of all s quantities as (δy, b.f_1) y_1. But f_1 an vary with each layer. They can be pressed for any position by conside the similar triangles on the face of stress diagram in Fig. 2, from which

$$\frac{f_1}{f} = \frac{y_1}{y}$$

$$\therefore f_1 = \frac{f\,y_1}{y}$$



The volume of a thin layer of the "stress dge" is then :—

$y. f_1 = b. \delta y \left(\frac{f y_1}{y}\right)$ and the moment any layer distant y_1 from N.A. $= b. \delta y.$ $\frac{y_1}{y}\Big)\, y_1$ and as $M_R =$ the sum of all h quantities on both sides of N.A. we

$$M_R = z \int_0^y b. \delta y. \frac{f y_1{}^2}{y} \quad \text{But } y, = \frac{d}{2}$$

he limit of depth.

$$\therefore M_R = \frac{f}{y.} \frac{bd^3}{12}$$

The quantity $\frac{bd^3}{12}$ is called the "second ment" or "moment of inertia" (I) of section, "y" is the distance of the hest fibres from the N.A, and "f" is extreme fibre stress per unit of area.

Ve can therefore write $M_R = \frac{f}{y}. I$; or f, and because "I" and "y" are in ns of the dimensions of the section and ern its capacity to resist bending nent due to its "form," $\frac{I}{y}$ is called the dulus of section (Z), viz :—measure of ength due to the form of section, apart n the material used in its construction.

s $y = \frac{d}{2}$ in the particular case we e considered, $M_R = \frac{f}{y}. \frac{bd^3}{12}$

$$= \frac{2f}{d}. \frac{bd^3}{12}$$

$$= \frac{bd^2}{6.} f, \text{ as before at equation (b)}$$

The quantity I is in all cases found to al the sum of "the products of all the ll elements of area of the section, the squares of their respective ances from the axis," = say, $\Sigma a.y^2$, re "a" = the area of elementary e, "y" = its distance from N.A.

o illustrate this "sum," draw a wedge ilar to a stress wedge, Fig. 3. Its n represents the *mode* of distribution, the intensity of stress, "f," is replaced linear distance equal to the distance ne extreme fibres from the N.A.

et this wedge be divided into very thin rs as shown at the top of the figure, the length of each layer agrees with qual to) its distance from N.A., ∴ the of the *end* of the layer—an elemen- slice of the section—multiplied by ength and again by its distance from gives the "moment of the layer." the moment of one layer, say the ermost $= a_1 y_1{}^2$, which is one of the lucts referred to in the mathematical nition, and the sum of the moments of these layers about the axis evidently als Σ all such quantities as $a.y^2$, e the moment of the stress wedge ch embodies all these quantities $= \sigma a.y^2$.

alculating the moment for *one* wedge noting that $y = \frac{d}{2}$, we get volume of ge $= \frac{1}{2}\left(b. \frac{d}{2}. \frac{d}{2}\right)$ and leverage = 1 about N.A.

$$\therefore \text{vol.} \times \text{lev.} = \frac{bd^2}{8} \times \frac{d}{3}$$

$$\text{(and for 2 wedges)} \quad \text{,,} \quad = 2\left(\frac{bd^3}{24}\right)$$

$$= \frac{bd^3}{12}$$

This is the mathematical value of "I" for the rectangular section.

Now notice that if the value of "y" $\left(\text{viz.:—}\frac{d}{2}\right)$ be replaced by "f" in the diagram, the value of the moment is changed into the actual "moment of resistance." In changing, we divide out "y" and multiply by "f", thus :—$M_R = \frac{I. f}{y}$, which is the "general" statement of the moment of resistance of a beam.

We shall call the two wedges in Fig. 3 "inertia wedges." They have linear dimensions *only*, which are in terms of the dimensions of the section, and their moment about N.A. is at once convertible into M_R by changing the moment into that of the equivalent "stress wedges."

If we *continue* to represent variation of intensity of stress by inertia wedges—remembering that stress intensity increases directly with the distance from N.A.—we shall be able to grip the meaning and value of the term "inertia" as applied to beam sections and the like, realising it as a physical property of form, governing its capacity to resist bending and not merely a numerical value.

In applying our method to other forms such as rolled steel and cast iron sections we have to realise :—

(a) That the inertia wedges are always built on the section and *appear* as if part of the length of the member.

(b) The linear distance representing the length of the wedge must always be equal to its distance from N.A.

(c) That the wedges must be so proportioned as to have *equal volumes* in order to form a true couple in opposition to bending moment.

When a section is symmetrical about the N.A. the inertia of the whole section can most easily be conceived by making it into a series of "pairs of wedges" crossing the axis as in Fig 3.

Examine Fig. 4. This consists of three pairs of elementary wedges crossing N.A. (a) The "full dimension" wedges, (b) the pairs of side wedges, lightly drawn, which are to be removed in forming the section. Hence $I_{N.A.} =$ moments of full sections —moments of side wedges.

$$= \frac{bd^3}{12} - \frac{2\,\frac{b_1}{2}\,d_1{}^3}{12}$$

$$= \frac{1}{12}\left(bd^3 - b_1\,d_1{}^3\right).$$

In the reference to Fig. 4 the same result is obtained by calculating the moments of the separate wedges, instead of using our previous result for the full rectangle. This latter method must be employed for all cases of unsymmetrical section.

Figs. 5, 6 and 7 should now be carefully studied and the inertia values obtained by summing the moments of the wedges from the diagrams, assuming N.A. to be known.

Note particularly that where the mode of dimensioning a section is in *terms of the full depth* the resulting inertia is always of the form $\frac{bd^3}{12}$, but if, as in unsymmetrical sections, the dimensions are the *distances from N.A. to the flanges, etc.*, the result is always of the form $\frac{bd^3}{3}$. If these fractions $\frac{1}{12}$th and $\frac{1}{3}$rd be remembered the "I" can be written down at sight from a dimensioned section, and there is no need to memorise the expression of "I" in any set form.

The method is clearly expressed in the reference to Fig. 5, and the results of similar application in Figs. 6 and 7. The wedges *in every case* must have their vertices in the N.A.

It now remains to show how we must divide the section into two parts, such that the inertia or stress wedges built on these shall have equal volumes.

This is guaranteed by placing the axis through the "centre of area" or C.G. of the section, which may be proved as follows :—

The N.A. is a line dividing the section into two parts, so that each area has the same moment about the line of division and the C.G. is the point through which all such lines pass.

We are concerned with a principal axis parallel to the bearing surface of the girder.

Thus, in Fig. 8, taking moments about N.A. we have :—

$$(t.d).\frac{d}{2} = (B.D)\,\frac{D}{2} - 2\left(\frac{B_1}{2}. D_1\right)\frac{D_1}{2}$$

$$\therefore\ \tfrac{1}{2}(t.d^2) = \tfrac{1}{2}(BD^2) - \tfrac{1}{2}(B_1\,D_1{}^2).$$

(We have assumed that the simple method of calculating the position of the C.G. is known.)

Observe that each of the terms of the above expression has the same value as the volumes of the corresponding parts of the inertia wedge at Fig. 5, and demonstrates that the volumes of the I wedges above and below N.A. are equal. This shows conclusively that for the determination of the value of I in computing the resistance of a single irregular section against bending we must calculate its value about the neutral axis. The inertia about any other axis does not at present concern us.

(To be continued.)

A HUGE STEEL-ARCH BRIDGE.

The bridge which is being constructed at Hell Gate over the East River, in New York, between Long Island and Wards Island, will be, when finished, the largest steel-arch bridge in the world. It is designed to carry four lines of railway, and forms part of the New York Connecting Railroad.

The design, for which Mr. Gustav Lindenthal is responsible, includes a number of novel features. The structure is a two-hinged framed arch of 1,017 ft. span between the towers at each end, 977½ ft. span centre to centre of hinges, and 220 ft. rise from hinges to crown of lower chord. The latter is of parabolic outline, and intersects the roadway three panels out from the abutments.

The roadway will consist of a reinforced concrete trough filled with ballast in which the sleepers are embedded. The main stringers of the floor carry 8-in. transverse I beams, 15 in. apart, and between and on the top of these the reinforced concrete slab of the track trough is built. Each track will have its independent trough.

At each end of the bridge there will be a huge tower, built of reinforced concrete and faced with granite. These towers are essential for the stability of the bridge and they will also form ornamental portals and terminals. They will be used in erecting the structure, serving as supports for the vertical piers or towers of the anchor system. The land abutment pier on Long Island is well under way and the foundations for the Wards Island pier are nearly complete.

H.M. GUNWHARF STORES, PORTSMOUTH.

The interesting example of reinforced concrete construction shown in the accompanying illustrations has just been carried out at H.M. Gunwharf Stores, Portsmouth, for H.M. War Department. The outer shells of the two storehouses are in brickwork, the internal construction and the connecting bridge being of reinforced concrete on the Somerville system.

Each building consists of two storeys. The first floor and bridge are designed to carry $2\frac{1}{2}$ cwts. per ft. super. and the roof 2 cwt. per ft. super. It was desired by the War Department to utilise as much as possible of the old brick walls, and in order to tie these together and distribute the load on them a string course of reinforced concrete about 2 ft. by 1 ft. 6 in. was run all round the building at first-floor level. This was reinforced against positive and negative moments at any point.

An examination of the ground was made where the old internal walls were demolished, and it was found that the subsoil was incapable of supporting the columns, amounting approximately to 100 tons. Time not admitting of reinforced concrete piles being made, four 12-in. by 12-in. creosoted fir piles were driven to a depth of about 15 ft. to support a reinforced concrete grid, on which the column was then placed.

The columns were constructed as shown on the drawing, the lateral reinforcement being made with the Somerville patent twisted link.

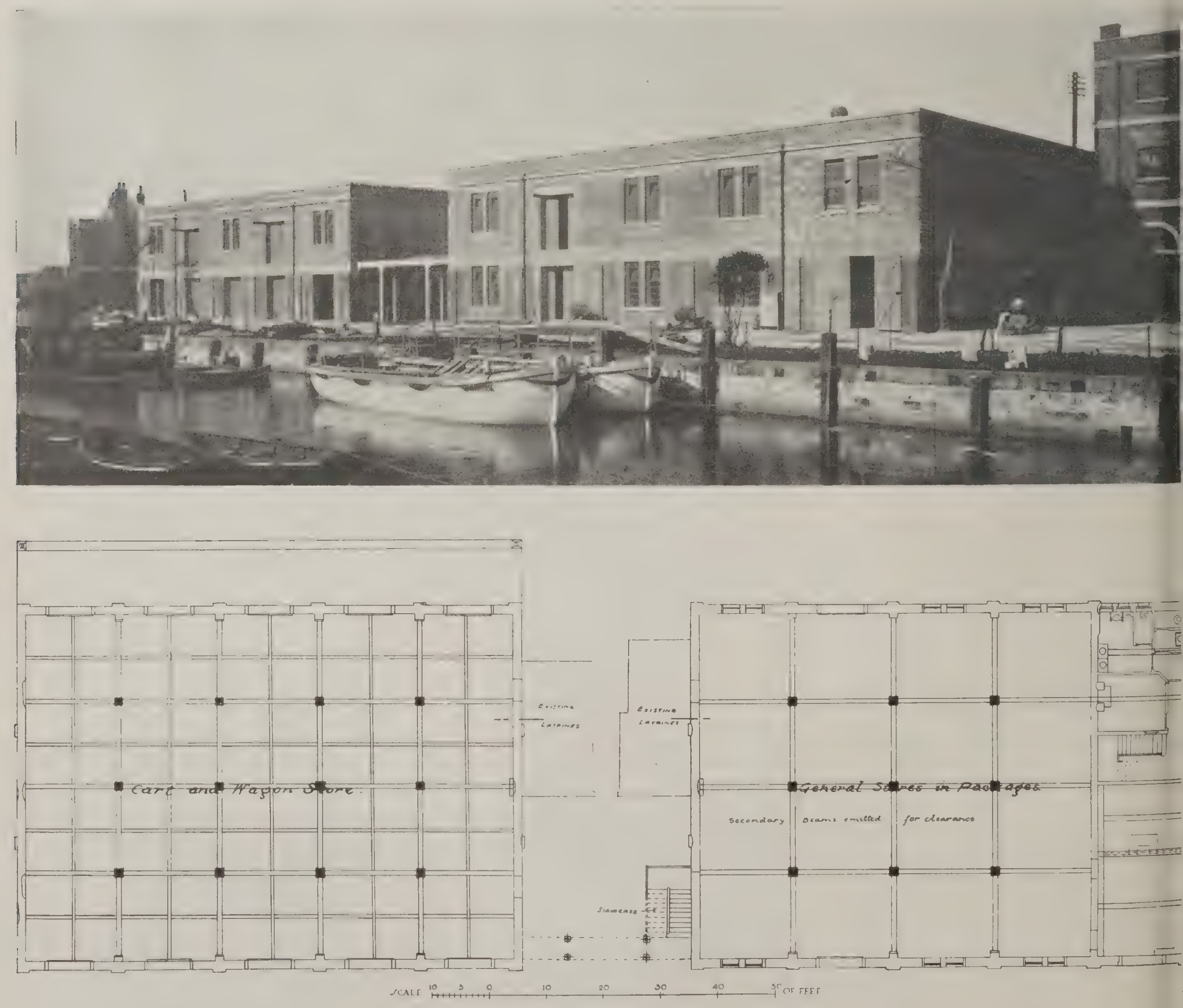
The shape of the buildings admitted of a most economical employment of cross reinforcement, the depth of the roof slab being $3\frac{1}{2}$ in. and the first-floor slab 4 in. The main beams run from column to column, while the secondary beams cross each other at their centres and take a support on the main beams at their centres.

In designing advantage was taken of continuity to the fullest possible extent, the War Office happily recognising without question the validity of such continuity assumptions made by the designers, which, needless to say, proved to be well foun when the floors were subjected to the h test load of 4 cwt. per sq. ft. the defle was immeasurable.

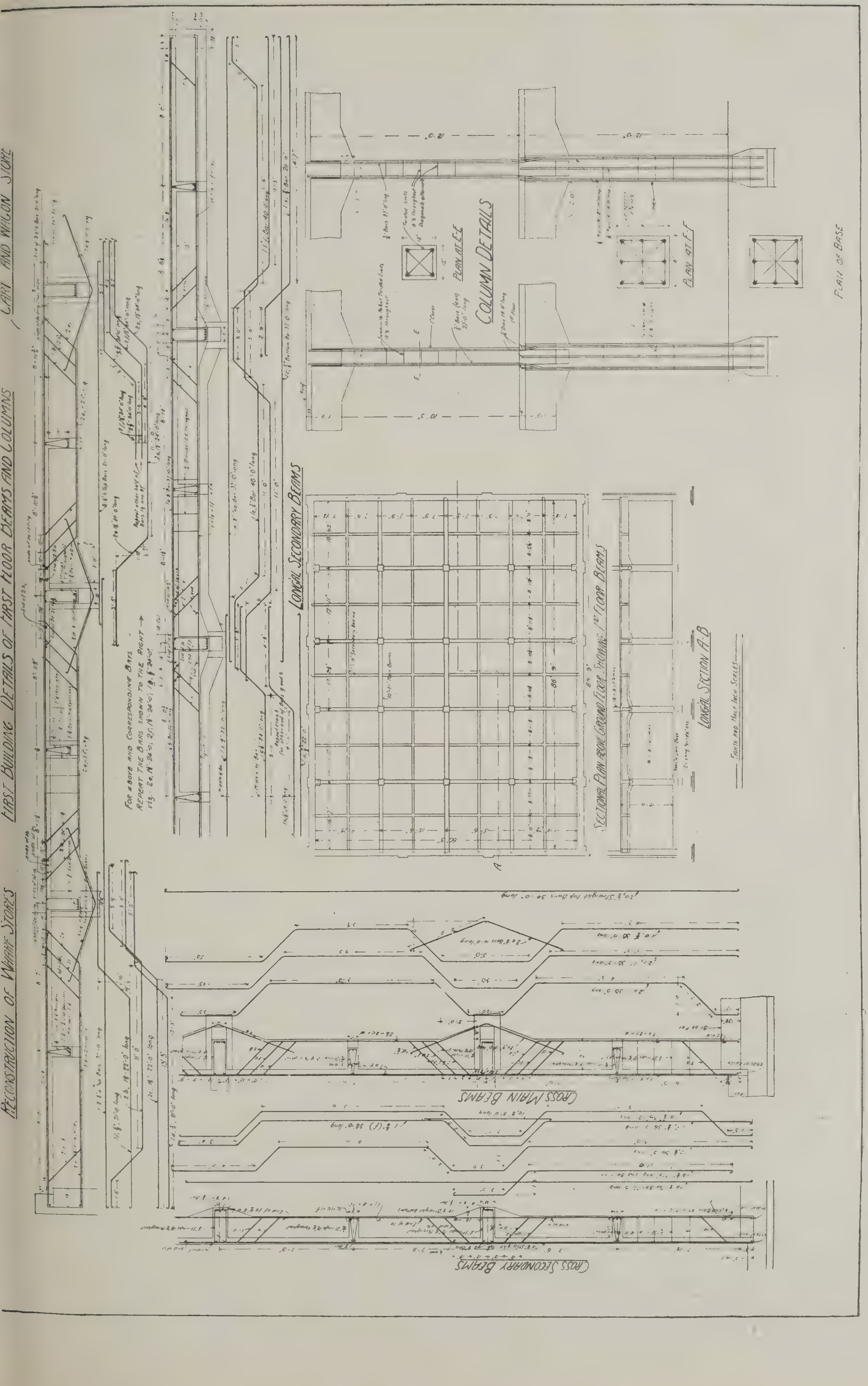
The excellent result of the test is buted not only to the design itself b the materials of which the concrete composed, viz., graded sea shingle i sizes from $1\frac{1}{2}$ in. down to sand mixed i proportion of five parts of the gr aggregate to one of the British stan cement. This gives a concrete which been found of excellent hardness an preferable to the old-fashioned 3 crushed ballast mixture— a fashion n sitated in the early days of reinforced crete by the very close spacing of steel employment of unskilled labour. steel used was British standard No. 15

The photograph of the interior s the underside of the roof fitted with r steel joists as travellers. This vie somewhat interesting as showing on the many simple ways in which a forced concrete warehouse may be f up with attachment for rolled steel j thus disproving the alleged difficult fixing rolled steel joists, angles, etc. machinery.

Messrs. D. G. Somerville and Co., designed the reinforced concrete por and carried out the whole of the under the supervision of the Divisi Officer, Major Morris, R.E.


Cart and Wagon Store
Existing Latrines
Existing Latrines
General Stores in Packages
Secondary Beams omitted for clearance
Staircase
SCALE 10 5 0 10 20 30 40 50 OF FEET

H.M. GUNWHARF STORES, PORTSMOUTH.


RECONSTRUCTION OF WHARF STORES
FIRST BUILDING DETAILS OF FIRST FLOOR BEAMS AND COLUMNS
CART AND WAGON STORE
LONGL SECONDARY BEAMS
COLUMN DETAILS
PLAN AT E.E
PLAN AT F.F
PLAN OF BASE
SECTIONAL PLAN ABOVE GROUND FLOOR SHOWING 1ST FLOOR BEAMS
LONGL SECTION A.B
EIGHTH AND HALF INCH SCALES
CROSS MAIN BEAMS
CROSS SECONDARY BEAMS
FOR ABOVE AND CORRESPONDING BAYS REPEAT THE BARS SHOWN TO THE RIGHT

H.M. GUNWHARF STORES, PORTSMOUTH: DETAILS OF REINFORCED CONCRETE CONSTRUCTION.

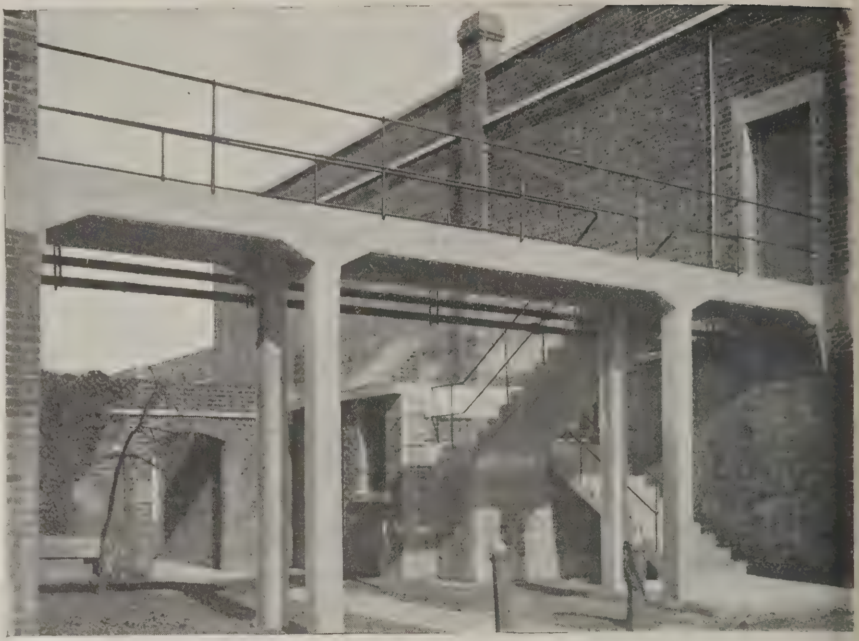
(See page 216.)

CANADIAN RAILWAY BRIDGE CONSTRUCTION.

An account of the reconstruction of the Canadian Pacific Railway Company's bridge over the St. Lawrence River, near Caughnawaga, about seven miles from Montreal, has been given in a paper presented to the Canadian Society of Civil Engineers by Mr. P. B. Motley, the engineer of bridges for the railway company. The erection of the steelwork was started in March, 1911, and completed at the beginning of last November.

The old bridge, which was built in 1885-7, consisted, over the main river channel, of four spans, two deck and two through, continuous over five supports. The new one was necessitated by the use of much heavier engines and by the need for a double track. In its construction interference with the traffic had to be avoided; and it was therefore decided to build two independent single-track bridges and remove the old bridge in sections, the traffic being transferred from side to side.

From observations during the life of the old bridge it was noted that the ice of Lake St. Louis generally grounded on the Lachine side of the river in shallow water, and after breaking up floated under the Lachine end of the bridge in small pieces in a manner which did not seem to justify the existence of four 240 ft. spans between piers Nos. 3 and 7. It was therefore decided to bisect these spans by the building of new intermediate piers, and using eight 120 ft. spans instead of four 240 ft. This resulted in considerable economy in cost. With these exceptions, the structure was renewed in span lengths similar to those which originally existed, but instead of the continuous spans between piers Nos. 11 and 15 it was decided to use simple spans of ordinary deck and through types. The new second track was placed on the downstream side of the existing bridge. The added masonry was bonded into the old above the water line, while below the water line open caissons were sunk generally to the same hard bottom to which the original masonry was carried, except in the case of piers Nos. 9 to 13, where pneumatic caissons were found necessary.



H.M. GUNWHARF STORES, PORTSMOUTH: CONNECTING BRIDGE.
(*See page* 216.)

The 80 ft. deck plate girders at the Lachine end of the bridge are of the Canadian Pacific Railway standard design, and are single-track spans placed alongside each other. The 120 ft. spans are Deck Warren truss spans with riveted connections, their ties resting upon the top chords. They also are simple single-track spans laid abreast of each other. The 240 ft. spans are Warren trusses with riveted connections and have the usual floor system of stringers and floor beams (two stringers per track) riveted against the vertical posts immediately under the top chord. The upper laterals are also riveted immediately below the top chord, and connected with the top flanges of the stringers, where they intersect with same. The 270 ft. flanking spans are Warren trusses, and, while longer in the panel lengths than the 240 ft. spans, are the same in general description. The 408 ft. spans are of the subpanelled Pratt truss
type, and the top chords are curved, a
as possible, to an approximate parab
The method of erecting the 408 ft.
constituted one of the most interesting
tions of the work. The scheme w
launch the span endwise with its rea
supported upon a truck or buggy,
the forward end was supported on a
scow of special design. In order to
overstraining the adjacent 270 ft. spa
the concentrated loads of the sliding
an ingenious framed structure was des
by which it was possible so to distr
the end reaction over the floor syste
the carrying span that no part wou
strained over allowable units. The
ways consisted of eight 100 lb. gr
rails (two sets of four), on which cast
skids or slippers were imposed.
scheme was to move the span forward
it came to the last panel of the 2
span, where, of course, the front be
of the three would naturally tend to
overboard. The two outer bearings
here abandoned, and the span wedg
on the centre bearing only. The
reaction being thus concentrated o
point required the end panel of string
the 270 ft. spans to be reinforced.

H.M. GUNWHARF STORES, PORTSMOUTH: CART AND WAGON STORE.
(*See page* 216.)

THE CONCRETE INSTITUT

The forty-seventh ordinary general
ing of the Concrete Institute will be
to-morrow at 7.30 p.m., when a discu
upon Mr. W. Cyril Cocking's paper
titled "Calculations and Details of
Frame Buildings from the Draughts
Standpoint" (which was read at the
ing on February 26), will take place.
following gentlemen have been ask
take part in the discussion: Prof
Henry Adams, Mr. S. Bylander, M
Fiander Etchells, Mr. Oscar Faber,
Mr. F. Hudlestone.

It has been decided to hold inf
meetings once a month during the se
for the benefit of junior members o
Concrete Institute. The first meeting
take place on Friday, April 3, at 7.30
when Mr. E. Fiander Etchells will
the chair. The business before the
ing will be the inauguration of the
of meetings and a discussion on prob
proposed by the junior members atten

TRADE AND CRAFT.

A New Tracing Cloth.

Tracing cloth was originally invented by Mr. F. G. Spilsbury in 1859, but it re- uined somewhat unsatisfactory, both in nsparency and finish, until 1881, when, the introduction by Mr. Sagar of a dif- ential speed calendering machine, a nsiderable improvement was effected. nce then it has become an indispensable rt of drawing office equipment.

t is essential that tracing cloth should ssess at least two qualities: it should be ficiently transparent to reveal every de- l of the drawing which it covers, and its face should take and retain perfectly ry mark of the tracing pen. A cloth ich, as we have ascertained by a prac- al test, admirably fulfils both these re- rements has recently been perfected der a new process and introduced, with distinguishing mark, "R. C.," by a nufacturer in the Manchester district, ssrs. B. J. Hall and Co., Ltd., of West- nster, having been appointed sole sell- agents. Four grades—"Clyde," tirling," "Mansfield," and "Win- ster"—are manufactured at present l another will be added shortly. The th, which may be recommended for hitectural work, is also well adapted for ing fac-simile copies of tracings and wings. In regard to price, it is said to about 10 per cent. cheaper than other hs of similar quality, so its extensive ption, particularly in large offices re prodigious quantities are constantly ng used up, should be assured.

A New Metalwork Catalogue.

hose specialists who incur the labour expense involved in the preparation of elaborate, well-arranged, and withal ely-looking catalogue lay architects builders under a considerable obliga- , which is doubtless always suitably nowledged—if not in words, certainly he attention which so useful a publi- on is sure to command. A catalogue his character is that which has just n issued by Mr. Robert Adams, of 3 5, Emerald Street, London, W.C., ch, besides being fully comprehensive in its scope—it deals with builders' mongery and art metal-work of all de- ptions—is so conveniently arranged out of the large mass of information prised in its various sections the user extract instantly any particular item nay happen to require.

he earlier sections are devoted to that s of fittings of which Mr. Robert ms has made a special study for up- ds of fifty years. Door-springs are n in such variety as to enable the to suit either his choice or the neces- of any particular occasion. The ous types include door-springs of le and single action, with fluid or air t check action, to fix in the floor or head, and giving the widest possible ing of the door; single-action spring es which open a complete half-circle; al patterns for exposed positions; pat- suitable for fixing in shallow floors for ships' decks. It is interesting to that the last-named have been ted for the Cunard Company's mag- nt liner the Aquitania.

section devoted to ventilating fit- and gearing reflect again the ver- mind of the inventor, whose well- n screwed rod and regulator system own in numerous applications that are iar in modern building practice. y other designs, perhaps less well known, but no less well considered, and all simple and practical, render this section very interesting, as well as extremely useful.

The section comprising door and casement bolts is very comprehensive, as it includes patterns for emergency doors, and plain and ornamental types for French casements. There are, moreover, illustrations of other designs of casement bolts, finger-plates, rim locks, and other fittings of special interest to those who use high-class French work.

Equally complete and serviceable are the sections showing casement stays and fittings, door furniture, locks, door handles, and, in fact, most of those fittings which an intimate knowledge of building requirements can suggest.

Architects, surveyors, and contractors will be glad to possess and preserve a catalogue that, conveniently arranged, well produced, and including among its hundreds of illustrations many of the excellent inventions and new ideas of this old-established firm, is as indispensable a work of reference as any special catalogue can be. Messrs. Robert Adams are contractors to H.M. Government, and have been awarded sixty medals and diplomas for novelty and excellence in design and workmanship.

Church Ventilation.

Cushendall Church, co. Antrim, is being supplied with patent concealed extract ventilators by Messrs. E. H. Shorland and Brother, Ltd., of Failsworth, Manchester.

Oilcans for the Navy.

Messrs. Joseph Kaye and Sons, Ltd., of Leeds, have received further orders from the British Navy for 4,468 of their patent seamless serrated oilcans, fitted with patent seamless spouts. A total of 60,048 of this particular pattern alone are to be distributed next month (April) to the different dockyards.

KING'S CROSS STATION IMPROVEMENT COMPETITION.

We have received the following enquiries with respect to the competition for the improvement of King's Cross Station, particulars of which were published in our issue for March 11:

Questions.

1. Is the age limit twenty-five years?
2. Could you give a sketch plan for the benefit of provincial students, showing the site of Tube station, etc., these not being shown on the ordnance map.
3. Can the glazing bars in the wind screens be altered?
4. Must the drawings be delivered flat?
5. Do the conditions allow for the removal of all sheds and shelters in the foreground?
6. Is it understood that serious alterations to the roads and approaches are not desired?
7. What is the approximate size of shelters required in the foreground?

Answers.

1. There is no age limit.
2. The approximate centre of the Tube station is in the frontage line of pavement above level 55.2.
3. The glazing bars in the wind screens must remain unaltered.
4. The drawings must be delivered flat.
5. All sheds and shelters in the foreground can be removed as well as the existing underground station. Suitable entrances to the station at the lower level are desired.
6. No serious alteration to the main approaches is intended.
7. The existing iron and glass shelter over the entrance road, immediately in front of the station, is to be kept as a shelter for vehicular traffic, but this can be altered and adapted at the discretion of the competitors.

The competition closes on Wednesday, April 8.

COMPETITIONS.

Constitutional Club, Grimsby.

The Building Committee of the proposed new Constitutional Club, Grimsby, invite designs for new premises to be erected at the corner of Victoria Street and Upper Spring Street, at an estimated cost of £3,000 (exclusive of architect's fees and furnishing). Premiums of £40, which will merge into the architect's commission, £20, and £10 respectively are offered to the authors of the three premiated designs selected by the committee, who will be sole judges and whose decision must be accepted as final. Plans must be sent to the secretary on or before June 2, 1914. Conditions of competition will be sent to any applicant on receipt of a stamped addressed foolscap envelope. Particulars will be forwarded on receipt of a deposit of £2, which will be returned to those who send in designs or if the whole of the full particulars are sent back within ten days from the date of their receipt by the applicant. Applications to be addressed to Mr. H. W. V. Sheckell, Secretary, Constitutional Club, Victoria Street, Grimsby.

Technical School, Southport.

Southport Town Council have adopted a resolution urging that competitive designs be obtained for the erection of a technical school on the site of the present skating rink, together with the necessary alterations to the front portion of the building for administrative and medical purposes, at a cost not exceeding £16,000. Alternative designs are to be invited for an entirely new building.

Market Entrance, Llanelly.

The Markets Committee of Llanelly Corporation have decided to invite competitive designs for an improvement to the Stepney Street entrance of Llanelly Market. It is proposed to offer a prize of 50 guineas, to be merged into the selected architect's commission.

Hospital, Durham.

Durham Board of Guardians have decided to invite not more than six architects to submit designs for a new hospital. The building is to accommodate eighty beds, and provision is to be made for future extension. The R.I.B.A. will be invited to appoint an assessor.

FACULTY OF ARCHITECTURE, BRITISH SCHOOL AT ROME.

At the meeting of the Council of the British School at Rome, held last week at St. James's Palace, the several faculties were appointed for the ensuing year. That of Architecture is constituted as follows: Mr. Reginald Blomfield, Mr. W. Curtis Green, Mr. W. R. Lethaby, Mr. E. L. Lutyens, Sir Robert Lorimer, Mr. Ernest Newton, Professor C. H. Reilly, Mr. J. W. Simpson, Mr. Leonard Stokes, Sir Aston Webb.

PROJECTED NEW WORKS.

Concert and Picture Hall, Whickham, Newcastle.

Whickham U.D.C. have approved plans for a proposed concert and picture hall for Mr. G. H. Highton.

Offices, Haslingden.

Haslingden Guardians have decided to proceed with the erection of a new board-room and offices.

Bank Premises, City.

A new building is to be erected by the London City and Midland Bank on a plot of land in Leadenhall Street.

Church, Mill Hill.

A church, dedicated to St. Michael and All Angels, is to be erected at Mill Hill. When completed it will hold 750 persons.

Watford Infirmary Enlargement.

Watford Board of Guardians have decided to make extensive additions to the infirmary at an estimated cost of £10,000.

Library, Birmingham.

Birmingham City Council propose to rebuild and re-equip Northfield Free Library, which was recently destroyed by fire.

Church, Elland.

Messrs. Wills and Sons, architects, of Derby, have prepared designs for a new United Methodist Church to be erected at Elland at an estimated cost of £3,500.

Hospital Extension, Mansfield.

Mansfield Corporation propose to extend the present accommodation at the infectious hospital on the Southwell Road by providing additions at a cost of £5,000.

School, Willesden.

Middlesex education authority propose to erect a new secondary school in Willesden for 300 boys and girls and to provide playing fields at a cost of £32,530.

Workmen's Houses, Hendon.

Subject to the sanction of the L.G.B., Hendon U.D.C. have accepted a tender of £9,960 for the erection of fifty workmen's cottages at Child's Hill on a site acquired from the Ecclesiastical Commissioners.

ostel, Southampton.

Mr. C. G. Montefiore, president of the Hartley University College, Southampton, [illegible] £2,000 for the construction of [illegible] in connection with the new build- [illegible] cheme at Highfield, Southampton.

Premises, Cardiff.

The plans of the Co-operative Wholesale Society's premises, which are to be erected on the site of the old Town Hall, St. Mary Street, Cardiff, have been submitted to the Public Works Committee and approved.

Houses, Rochester.

The following building plans have been approved by the Town Council: Two houses, St. Margaret Street, for Mr. W. Edmonds; two houses, Jersey Road, Strood Intra, for Mr. F. Holmes; and six houses, Ethelbert Road, St. Margaret, for Mr. J. H. Durrant.

Buildings, Rhyl.

Rhyl U.D.C. have approved the following plans: Ten dwelling-houses in Ernest Street and Marsh Road, Mr. F. J. Gamlin; new electrical power house at the Marine Lake, Rhyl Amusements, Ltd.; garage at rear of White Lion Hotel, High Street, Messrs. Brookes Brothers; alterations at Men's Convalescent Home; and conversion of portion of Mostyn Hotel in High Street and Wellington Road into shops, Messrs. Philip Thomas and Jos. Turner.

Church Extension, Ealing.

Considerable extension is contemplated in connection with the Windsor Road church, Ealing. The proposal is to build an assembly hall, with guild rooms above it, on the vacant land at the Broadway corner of the site, at a cost of between £4,000 and £5,000. Preliminary plans have been submitted by the architect, Mr. W. Pywell, and provisionally approved.

Town-Planning Scheme, Lifford, Warwick.

A scheme has been projected at Lifford for the development, on town-planning lines, of a large area of land the property of Major Baldwin, comprising about 113 acres. The scheme provides for the erection of 1,000 houses, about ten to the acre, which are to be let at rents ranging from 5s. to 15s. or 16s. per week. Provision will be made for allotments and open spaces, and also for the 100 ft. "ring" road which will be constructed across the estate.

Enlargements at Royal Naval Colleges.

As briefly announced in our last issue, it is intended to enlarge the Royal Naval Colleges at Osborne and Dartmouth, in order to satisfy the more exacting requirements of the Fleet. A sum of £102,000 is to be spent at Osborne, part of which will be devoted to improving the existing accommodation, and part to the provision of new buildings. At Dartmouth the scheme involves an expenditure of £95,000, and in addition £5,450 will be required for the erection and furnishing of barracks for seamen. The new swimming bath at Osborne will, it is anticipated, be completed this year, at a cost of £4,550.

Buildings, Aberdeen.

The Plans Committee of the Aberdeen Town Council have approved the following plans: Dwelling house on the north side of Cornhill Road, for Mr. George Watt, architect; dwelling house on the north side of Devanha Gardens, for Messrs. Esslemont and Cameron, per Mr. George B. Mitchell, architect; alterations at premises, No. 154a, Union Street, for the West End Café, Ltd.; per Messrs. Kelly and Nichol, architects; alterations at premises on the west side of Stevenson Street, for the Northern Loan Company, Ltd.; per Mr. George B. Mitchell, architect; electric sub-station on the west side of George Street, near Kingsland Place, for Richards, Ltd., per Messrs. Wilsons and Walker, architects; alterations at the premises, Nos. 599-601, Great Northern Road, for Mr. Joseph Shirras, per Messrs. D. and J. R. M'Millan, architects.

Replanning of Exeter.

It is proposed to remodel the central part of Exeter, and the corporation have employed Mr. Thomas H. Mawson to draw up a scheme. The widening of Paul Street is already under way, and it is hoped to place the new public library building which Mr. Carnegie is to give to Exeter in Queen Street, opposite the Royal Albert Memorial. Mr. Mawson's scheme embraces the following other proposals: Municipal offices, town hall, etc., between Paul Street and the present High Street end of the market. Continuation of Waterbeer Street through to Queen Street. A new South-Western Railway station opposite the Victoria Hall, and extending over the line on a level with Queen Street. Widening of St. Martin's Lane to give a view of the Cathedral Close, but still to be used as a footpath only. New street opposite the Guildhall to the Cathedral Yard, affording fresh views of both structures. Creation of an open space at the top of North Street and S
Street. A circus embracing the hea
Paris Street, Southernhay, and Longl
Street. Rearrangement of Norther
approach to Rougemont Grounds
Queen Street. Mr. Mawson propose
his scheme should be carried out as
sion arises from time to time.

London.

Subject to compliance with certain
ditions, consent has been given b
L.C.C. to the execution of the follo
works:

Brixton.—Alterations at 14 and 16,
tric Avenue, Brixton, on the applicati
Mr. J. Richardson, on behalf of
trustees of the late J. Fyfe.

Camberwell, North.—Wood and
shed of a temporary character on the
court of the South-Eastern and Cha
Railway Company's arches, 356 and
on the western side of Camberwell S
Road, on the application of Messr
Harrison and Co., on behalf of the B
side Foundry Company.

Chelsea.—Two additional storeys
rear of 35, Royal Avenue, Chelsea, o
application of Mr. W. H. Duffield.

Chelsea.—Buildings on the norther
of Mallord Street, Chelsea, on the ap
tion of Mr. F. E. Williams, on beh
Mr. R. W. Black.

City of London and Holborn.—U
148-150, Holborn, by means of ope
at the basement and ground floor
on the application of Mr. C. F. Do
behalf of the London and South-W
Bank, Ltd.

Fulham.—Porches to twenty-two h
on the south-eastern side of Daisy
Fulham, on the application of Mr.
Kinton, on behalf of Mr. J. Means.

Conversion of 48-50, 52-54, 59-61
60-62, Fairholme Road, West Kensi
into flats, on the application of Mr.
Hollis, on behalf of the trustees of M
N. Salaman estates.

Greenwich.—Additional cubical
in respect of the erection of a rope n
Anchor and Hope Lane, Charlton, o
application of Messrs. Bradshaw, E
and Co., on behalf of Frost Brothers

Hoxton.—Building exceeding 2
cubic feet in extent, to be used for t
pairing of gas stoves, at the premi
the Gas Light and Coke Company, L
nam Street, Haggerston, on the ap
tion of the Gas Light and Coke Com

Islington, East.—School upon a s
the corner of Matthias Road and W
ville Road, Islington.

Islington, North.—Porches to five h
on the southern side of Fitzwarren
dens, Highgate, on the applicatio
Messrs. Hamiltons.

Limehouse.—Iron and glass shelt
the East London Hospital for Chi
Glamis Road, Limehouse, on the ap
tion of Mr. W. Campbell Jones, on
of the Governors of the East London
pital.

Marylebone, East.—Formation o
opening in the party wall at the g
floor level between 18 and 19, M
Place, St. Marylebone, on the applic
of Mr. F. M. Elgood, on behalf o
Margaret Street Hospital for Consum

Norwood.—Fire-station on the e
side of Norwood Road.

Paddington, South.—Formation of
ings in the party wall at the groun

(*Continued on page xxvi.*)

PATENT VULCANITE ROOFING

For Flat Roofs.

Complies with the 1894 London Building Act.

Chiswick Empire.

Roof Gardens
Roof Tanks

◆

Applied to
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PROJECTED NEW WORKS

(*Continued from page 220*).

first floor levels between 262 and 264, Gloucester Terrace, Paddington, on the application of Messrs. Hunter and Hunter.

St. George.—Projecting shop at 138, Commercial Road East, Stepney, on the application of Mr. G. E. Nield, on behalf of Mrs. F. M. Wix.

St. Pancras, South.—Building at the premises of Messrs. W. and G. Du Cros, Wells Street and Pakenham Street, St. Pancras, on the application of Mr. C. Sabey.

Strand.—Deviations from the plan certified by the district surveyor so far as relates to the proposed erection of a block of flats upon the site of 16 and 17, York Buildings, Adelphi, on the application of Mr. E. Cannell, on behalf of Mr. R. Clermont.

Wandsworth.—One storey shops at 198, 200, and 202, Mitcham Road, Tooting, on the application of Mr. R. A. Price, on behalf of the County of London Estate Company, Ltd.

Bay windows and porches to twelve houses on the south-western side of Lynwood Road, Tooting, on the application of Mr. E. W. Fisher, on behalf of Mrs. M. J. Miller.

Woolwich.—Buildings upon a site abutting upon Herbert Road and May Place Lane, Woolwich.

Buildings, Lincoln.

Lincoln Building and Improvement Committee have passed the following plans: C. Dowse, eighteen houses, Lark Lane; F. W. Horton, four houses, facing Weir Street; F. W. Horton, four houses, facing River Witham; R. L. Holland, three houses, Newland Street West; Lincoln Land and Building Society, two houses, Cecil Street; C. Taylor, twelve houses, Kingsway; Wright and Son, Ltd., two houses, Queensway; Race Committee, ambulance room, Lincoln Race Stand; Tyler and Sons, shop front, Hotel Central; F. Choice, Ltd., alteration and additions, 279, High Street.

New Buildings, Elland.

Plans have been prepared for two new churches, a Sunday-school, and a factory at Elland. One of the churches proposed to be erected is that for which Canon Winter (Rector of Elland) received an anonymous gift of nearly £7,000. The other is for the United Methodists of the town, while the Sunday-school is in connection with St. Thomas's Church, Greetland. The proposed new factory is for Messrs. Thomas Casson and Brother, woollen manufacturers, Commercial Mills, Elland, who intend building premises in which is to be carried on the firm's dyeing and finishing trade.

Buildings, Easington.

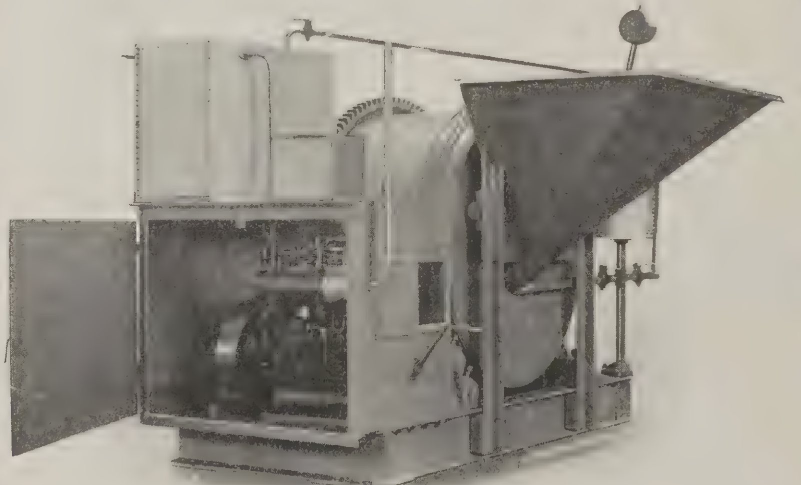
The following plans have been approved: Workmen's Club, Haswell Plough, for Club Co.; house and shop, Blackhall Colliery, for Mr. R. C. Keen; house and shop, Blackhall Colliery for Messrs. Thompson; sixteen houses, Easington, for Messrs. Nixon Brothers; additions to Workmen's club, Horden Colliery, for Mr. J. Hamilton; alterations to seven cottages, Thornley, for Mr. W. L. Liddell; picture hall, Trimdon Grange, for the Grange Picturedrome Con seven houses, main road, Wheatle for Mr. W. Welford; and two Ashmore Terrace, Wheatley Hill, f W. Welford.

Plans, Hendon.

Hendon District Council have ap the following plans: New road and Leatherville Avenue, Messrs. A. and Co., subject to agreement; new Golders Green Estate, Mr. H. J. A detached house, Vivian Avenue, Hamiltons; additions at Hendon H Hendon Hall, Ltd.; twelve houses ford Road, Golders Green, Mr. Adams; additions to motor gara conservatory, "Silchester," the Golders Green, Mr. W. J. King seven houses, semi-detached, Gardens and Golders Manor Drive, Haymills, Ltd.; pair of houses, He Avenue, Golders Green, Mr. A. nolds; house, Bridge Lane, Golders Mr. T. Cochrane; house, Beech Mill Hill, Mr. T. G. Golby; hou Park, Golders Green, Mr. W. J. four houses, Bridge Lane, Mr. C. C eight houses, Finchley Road, Green, Mr. E. Streather; house, Hill, Golders Green, Mr. A. J. Re pair houses, corner of Wycombe and Hodford Road, Mr. C. W. monds.

THE ROYAL ACADEMY.

We beg to remind our readers t sending-in day for drawings to the Academy is next Friday, March 27.



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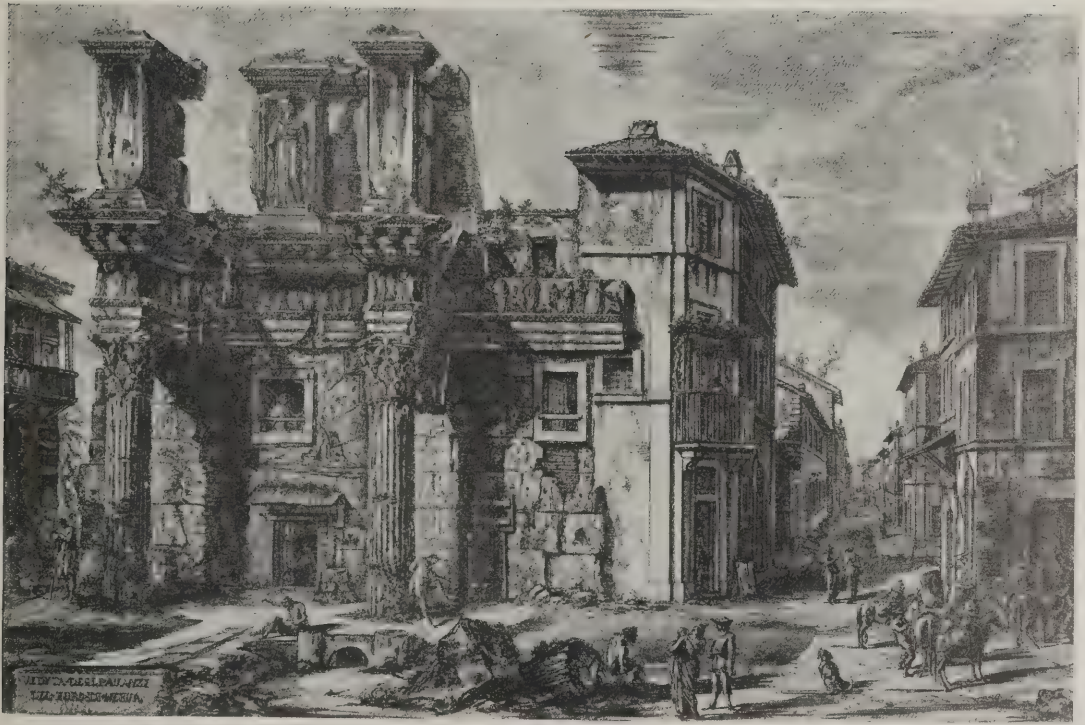
THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, April 1, 1914. Volume XXXIX. No. 1004.

No. 78.



(From Piranesi.)

THE ARCHITECTS' & BUILDERS' JOURNAL.

APRIL 1, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1004.

The London Museum.

IN olden days the wise men who wished to educate the ignorant public in historical facts or religious and moral doctrines caused pictures to be painted, in which the truths to be imparted appealed to the heart or mind through the eye in terms of crude drawing and vivid colours. A direct and efficacious method, it yet failed to keep pace with the development of the human mind; and literature was invented to supply its deficiencies. To such an extent to-day have the resources of the written word asserted their superiority as a means of education that it is now considered out-of-date, almost disgraceful, in fact, for painting to be representative, that is, to express the material facts of life merely for the sake of representing them. Among other branches historical painting for the purpose of teaching the lessons of history nas fallen into disrepute. Why explain clumsily and piecemeal in paint, says the advanced critic, what can be explained adroitly and comprehensively in prose? There is an obvious logic in the argument, whatever the lengths to which it may be carried by the extremists of the new cult. Withal, the written history does not entirely satisfy the multitude. There still persists a craving for some sort of ocular demonstration, for something to consolidate, perhaps supplement, the nebulous visualisations of history formed by the student of books. Nor is it merely in regard to history that this craving manifests itself; it extends to every subject under the sun; as any publisher could tell us, the more books there are produced, the greater is the demand for illustrated ones. Ocular demonstration, in short, is a human need, not confined to one class of subject or the other.

In view of these reflections, we are disposed to regard the London Museum, which in its new quarters at Stafford House was opened to the public last week, as a necessity rather than a luxury. It was perhaps characteristic of our freakish way of arranging things that the original London Museum should have been in Kensington, a Royal Borough, indeed, but a suburb far removed from the scenes of which the Museum preserves so many interesting associations. Equally typical, too, of our habit of muddling through to a satisfactory finish is the fact that its treasures have now found an almost ideal home in Stafford House. Apart from its central position, this mansion in the Mall is adapted in every way to the housing of London relics. The house itself, in the dingy dignity of its porticoed façade, is redolent of the tone and atmosphere of London. It has been fashioned to provide a series of small galleries, in which, in chronological sequence, the main periods of London's history from pre-historic times to the present day reveal themselves in the exhibits. For the architect and the architectural student the latter possess a strangely potent fascination. The pre-Roman site of London, a green waste of river, marsh, and forest: London as a military castrum, as a Saxon hamlet, as a Tudor town; Georgian London, revealed piecemeal by the prints in the basement galleries; the whole collection of pictures, prints, and models of London, have an interest that is not merely archæological, but is closely related to the practical interest we feel in the development of London to-day.

There are many things here on which the modern architect may ponder, not always with self-congratulation. We have particularly in our mind some prints which show the architectural treatment of London squares, such as Leicester Square and Golden Square, in the eighteenth century, when these were residential neighbourhoods; and, with all their precise formality, their calculated Classicism, they have a unity of effect, a sober air of dignity, that puts to positive shame the scattered, muddled experiments in town architecture that have accompanied the commercialising of these squares and others. The work of Messrs. Adshead and Ramsey at Kennington to take a recent example, has shown that essentially attractive terraces of dwelling-houses are still possible without discarding the restraints of Classic formalism Is it impracticable that the sense for architectura decency and order should be extended to the designing and planning of streets and squares of shops?

To be sure, a great deal of what is familiar to the average student of London architecture is at Stafford House. It has been seen in print shops, in othe museums, in private collections, books, periodicals We are all more or less familiar with these early essay in architecture and town planning, with these seventeenth and eighteenth century doorways, with Old S Paul's, Cheapside, or Charing Cross. But it has neve been seen in more imposing bulk nor in greater variety than here, and for this reason we cannot doubt that th London Museum will become a favourite haunt wit architectural students. It is perhaps to be regrette that the basement, where the most important of th architectural treasures are, is not too well lighted, bu this deficiency is capable of remedy. The collectio still lacks a catalogue, and until that is provided, exam nation of the exhibits must needs be a groping in th twilight of memories, some exceedingly dim. Eve so, the experience is one that no art lover is likely t forget. Nor is it likely that the interest of the colle tion will remain stationary, for the London Museum now that it has emerged from the tentative period its beginnings, and has reached an established pos tion, is bound, from time to time, to add to its treasure by purchases, by bequests, by gifts. Such has bee the history of every great national collection once has emerged from the chrysalis stage. Such, we pr dict, will be the fate of this which has so peculiar claim on the goodwill and practical assistance Londoners, whose newly awakened civic sense it ma be calculated to foster. The process of enrichme has already begun, for many of the most interestin prints and photographs, as well as more solid exhibit are the gifts of collectors who have placed their civ pride before their private instinct to possess. Unle we overestimate the significance of the Museum establishment, their example is bound to be followed

F. M.

The Bramante Quatercentenary.

T is not greatly surprising that so little notice has
been taken of the four hundredth anniversary of
the death of Bramante, otherwise Donato Agnolo.
was on March 11th, 1514, that he died, but the date
his birth is uncertain, "about 1444" being the com-
n guess. He is too remote from us to excite much
ention among a people who care all too little for art
artists, ancient or modern. The occasion, however,
mands at least a passing notice. Architects of the
naissance were apt to take all art for their province,
d Bramante was not exceptional in beginning as a
inter. In 1477 he decorated the palace of the
destà at Bergamo, and there remain in Lombardy
gmentary frescoes which are attributed to him. He
nt to Milan in 1472, and there built in so different
nanner from that which marks his work in Rome,
ither he went in 1499—a conjectural date—that
nythical Bramante of Milan has been imagined to
ount for a change that is more rationally attribut-
le to the maturing artistry of a man who, although
n fifty-five years old, was still plastic to the forma-
e influence of the mighty city in which he remained
the end of his days. His chief work at Milan is the
ne and sacristy of S. Maria dei Grazie, which, with
w other works of his, was illustrated in the Journal
December 11th, 1912. In his first building at
me, the *Tempietto* of S. Pietro in Montorio, it is
dent that the Classic surroundings developed in him
nce an entire sympathy with antique style and pro-
tion. He built in 1504 the cloister of S. Maria della
e; and fragments remain of his most admired work
Rome—that which he did at the Vatican for Pope
ius II., who wished to connect the Belvedere built
Innocent VIII. with the Vatican Palace. With this
ect Bramante designed a large quadrangle with
nnaded side galleries, leading up by three levels to
reat apse; but he finished only the eastern gallery.
built in the old Vatican the *loggie* decorated by
phael. The Cancelleria, which was begun before
mante went to Rome, but is nevertheless so cha-
teristic of his work as to justify its attribution to
by Letarouilly, represents, as Mr. H. H. Statham
said, "just the kind of step in advance (from semi-
thic) towards Classicism which one can imagine
mante to have made." As all the artists of the
naissance are commonly assumed to have been
ts, several sonnets and poems are attributed to
mante, but whether or not this ascription is com-
ible with the assertion that he was *inalfabeto* or
erate is a literary problem that we are not con-
ned to unravel. A list of the works assigned to
mante is contained in Von Geymüller's "Projets
nitifs pour le Basilique de St. Pierre"; and mention
his fine book reminds us of Mr. Statham's denial of
authenticity of the "Plan of St. Peter's as Proposed
Bramante," published in the original edition of Fer-
son's "Modern Architecture." It is too poor a
ception to be Bramante's.

The Barnsley Town Hall Competition.

HE Town Council who took the step of seeking
an assessor for this competition, with the curious
proviso that he should select not one but six
igns from which the Council would themselves
e the final choice, shows no sign of receding from
osition. As a result, and in view of the attitude of
architectural societies, the best or even the second-
talent is not likely to compete. In spite of much
hy talk about being masters in their own house, the
c of the Council's position is far from obvious. If
have so firm a faith in their own judgment, why
inate an assessor at all? Having nominated him,
arrogate to themselves the right of assessing his
ssment? Clearly an assessor burdened with
e restrictions can only serve one useful purpose, that of preventing his employers from choosing an utterly bad thing. If this idea has been, as seems possible, at the back of the Barnsley Council's mind, it argues discretion of a sort; but it does not argue the highest wisdom, nor does it encourage much faith in their capacity to make the ultimate selection. If they cannot trust themselves to separate the sheep from the goats, how can they decide with any accuracy which of the former quadrupeds is the best of six selected ones?

Southampton and its Bargate.

THERE has been a great outcry of late anent the proposed demolition of Southampton Bargate, and it is satisfactory to note that the would-be vandals have been foiled by the Ancient Monuments Act. The proposal was to pull down the gate in order to relieve the congestion of traffic in the roadway; report says that one of the several alternatives to this scheme of destruction has already been adopted in principle. So Southampton is to preserve its chief archæological treasure, which, having survived what we hope and believe to have been the worst of our so-called utilitarian age, may enjoy a further long lease of life. It is curious that every time one of these historical relics is threatened, a Press agitation and the intervention of the Office of Works are necessary to prevent the catastrophe. With all the lessons of their past experience behind them, our local patriots have not yet grasped the truth that Italy seized upon many years ago—that the preservation of monuments is not only good taste, but good business; that Southampton without its Bargate, York without gates or walls, any town, in short, that boasts historical associations, would attract so many less money-spending visitors if the emblems of these associations were removed.

Plastered-up Panelling at Colchester.

ABOUT a century ago there seems to have set in an inordinate craving for plaster and wallpaper. Novelty and fashion gave the then comparatively new system of internal wall-treatment an insensate vogue which is to-day the more difficult to understand because of the prevalent predilection for panelling; and the instances in which fine old work was covered up in obedience to a new craze must have been very numerous. So many cases have come to light within recent years as to set up a strong probability that many yet remain to be discovered—mainly by accident, as at the Red Lion Hotel, Colchester, "the town's most ancient hostelry," as it is alluringly described. Workmen repairing the hotel happened to knock away a portion of plaster, beneath which were found some fine oak panels. Further investigation revealed moulded and carved beams of oak and a wealth of panelling, enthusiasts declaring that, stripped of its plaster, the hotel is the most interesting example of Tudor architecture in the Eastern Counties, and the preservation of this character will be a chief aim in the restoration which is now in progress. No doubt some means will be adopted of protecting the wood from the ravages of insects and other destructive agencies as effectually as it has been safeguarded by the plaster which has so long kept it safe and sound, and has to that extent atoned for its otherwise abhorrent intrusion.

The Skyscraper.

WE are glad to learn that a feature of the United States section at the forthcoming Anglo-American Exhibition will be a series of architectural drawings illustrating the building of the skyscraper. At this exclusively American form of architecture most of the well-known New York architects have tried their hand, and the collection, if properly organised, should be of manifold interest. In the matter of selection we hope that expert advice will be asked for and given; for architecture, though the greatest of the arts, is apt to receive too little attention from Fine Art Committees, as usually constituted, for the reason that their time is fully occupied by the more showy departments of sculpture and painting. The fact that the skyscraper is an American product does not lessen its interest for English students of construction on the larger scale, nor are its severe limitations in form or ornament necessarily unpleasant to the æsthetic sense; in fact, the fine buildings of Cass Gilbert and others in the States have produced something like a revulsion in artistic sentiment towards these mammoth structures.

Builders' Burdens.

IN France also the building industry is oppressed with heavy burdens laid upon it by merciless legislation, and that it is taking vigorous defensive measures may serve for the encouragement of British builders to go and do likewise. In response to an invitation from the group of Chambres Syndicales du Bâtiment, a large number of architects, builders, and others having a more or less direct interest in the subject, met at the Civil Engineers' Hall in the Rue Blanche, Paris, to discuss the proposed new fiscal imposts. It is unnecessary to describe these in detail. Their character is sufficiently indicated in the protest by M. Villemin against the Government proposals to subject industry, for the next five years, "to every inquisitorial vexation"; and the resolution passed by the meeting strikes the same note in expressing determination to resist energetically every fiscal proposal involving inquisitorial examination of accounts and arbitrary assessments thereon. At the forthcoming elections, therefore, the industries are, we gather, to unite in organised and systematic opposition to the new proposals. It ought to be quite easy to convince the electorate that unduly heavy burdens imposed on industry are, in the most sinister sense of the phrase, "in restraint of trade" and that though their incidence may appear to be sectional (and therefore the more iniquitous), they really have, indirectly but none the less surely, a disastrous effect on the well-being of the community at large. If our own building employers, whose energies seem for the moment to be wholly absorbed in fighting—not always very tactfully—against trade-union aggression and irresponsibility, would organise a similar campaign, they might be able to convince politicians, as well as trade-unionists, of the folly and wickedness of all legislation that tends to shackle and cripple industry.

Strand "Improvements."

WE should be very sorry if, as has been suggested in some quarters, the demolition of the Tivoli Music-hall should seriously affect the Adelphi, and more especially one of the principal ornaments of John Street, the building of the Royal Society of Arts. The widening of the main thoroughfare will undoubtedly result in a slice being cut off the buildings that at present intervene between the Society of Arts and the Strand, and it is quite possible that the effect will be to give the house a frontage on this thoroughfare; but though this circumstance could not fail to enhance its value, there appears to be some apprehension lest its greater prosperity should lead to its downfall. In a word, it is suggested that the Society of Arts might abandon the house and the site if a tempting offer were forthcoming. To ourselves this seems very improbable. The Society, though restricted and altered in its activities, is still too flourishing to entertain the idea of leaving premises hallowed by the happiest associations of its history for the sake of filthy lucre. Even should this happen, there is still that vigorous body, the Ancient Monuments department of the Office of Works, which would be sure to keep its eye on so good a specimen of Adam building. Bu the fact that such notions can develop into rumou illustrates the condition of nervous anxiety to whi some of us are brought as soon as the word "improv ment" is mentioned.

The London Dispute.

A VERY ably written statement of their ca which has been issued in pamphlet form by t London Master Builders' Association, should far towards setting the matter in a clearer light befo the public, among whom it has been no doubt wide disseminated. Its comparative moderation of to and its irrefragable reasonableness should serve also convince the unionists themselves that, on the real fundamental issues, the employers' position is unassa able. That trade agreements should be honest observed, and that twenty instances of wanton vio tion of this elementary principle compel the employe to require some tangible guarantee of good faith, is t gist of the case. Failing the provision of such a guara tee, the employers have proclaimed, and still ma tain, a lockout that has endured too long. It rema for the unions to end the dispute, either by accepti the employers' proposal of a monetary deposit fr each side, forming a fund from which an arbitrati board should have power to award penalties for brea of agreement, or, alternatively, by suggesting so other form of guarantee that would be acceptable the employers. Last week we referred to the seemi reluctance of the employers to assent to the form guarantee proposed at a conference held at the invi tion of the National Federation. We are now assur however, that the employers withheld assent simp because they are genuinely convinced of the necessi in the interests of both parties for a more defin understanding of the terms of the proposal, and th their sole object is to secure a settlement that shall g them real and effectual safeguards against any repe tion of the flagrant and persistent breaches of agr ment which are at the root of all the trouble.

"The Fear of Iron."

IT is announced that a set of thirty-seven v remarkable ancient Greek surgical instruments been found near the site of Kolophon, in Ionia, a in commenting upon the fact that, with two exceptio all the instruments are of bronze, a "Times" cor spondent remarks that the custom of making kni either of stone or bronze was dictated by a super tious fear of iron. This idea is apparently derived fr Plutarch, who states that it was actually unlawful introduce any iron implement into a Greek temple, a no Roman priest might be shaved with an iron ra nor was it allowable to use iron scissors upon h Many such superstitions are of very practical and co mon-sense origin, and possibly an exaggerated not of "the perils that environ the man who meddles w cold iron" may have been derived from observat and experience of its ruinous effects in attract lightning, or even of the readiness with which it yiel itself up to destruction by rust. On both grounds, a leaving superstition out of the question, they may h refrained from making use of it in building constr tion. It has been questioned whether the early Gree even if they were able to exploit the available sour of ore, were sufficiently skilled to convert it into g durable metal; but the more we learn of these aston ing people, the greater becomes our respect for th accomplishment not only in the arts and sciences, also in the crafts and industries. Moreover, the for tion of an alloy like bronze involves a more advan metallurgical process than that of mere iron-smelt and the choice, whatever dictated it, must theref have been deliberate.

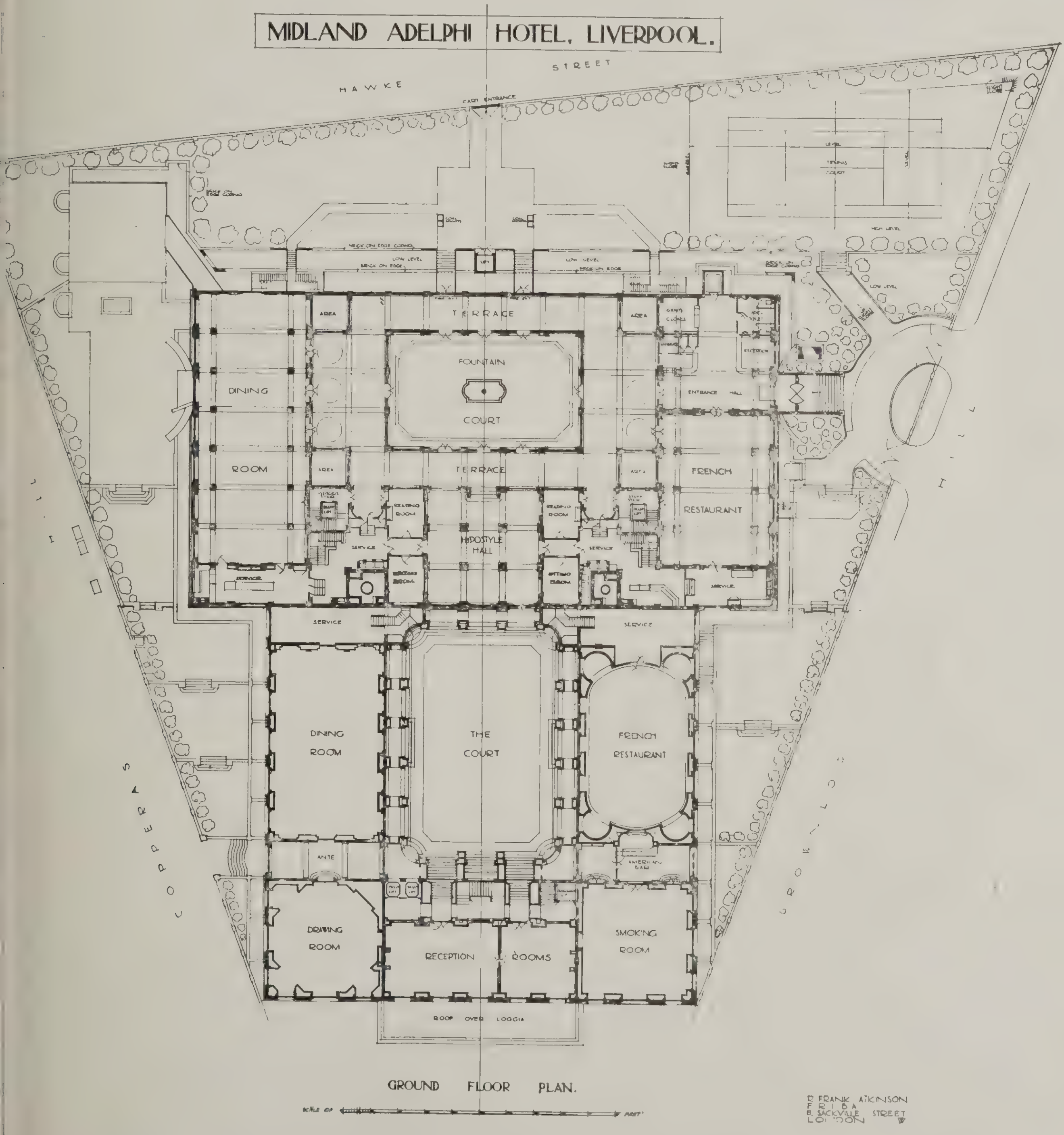
THE PLATES.

Midland Adelphi Hotel: Main Elevation.
R. Frank Atkinson, F.R.I.B.A., Architect.

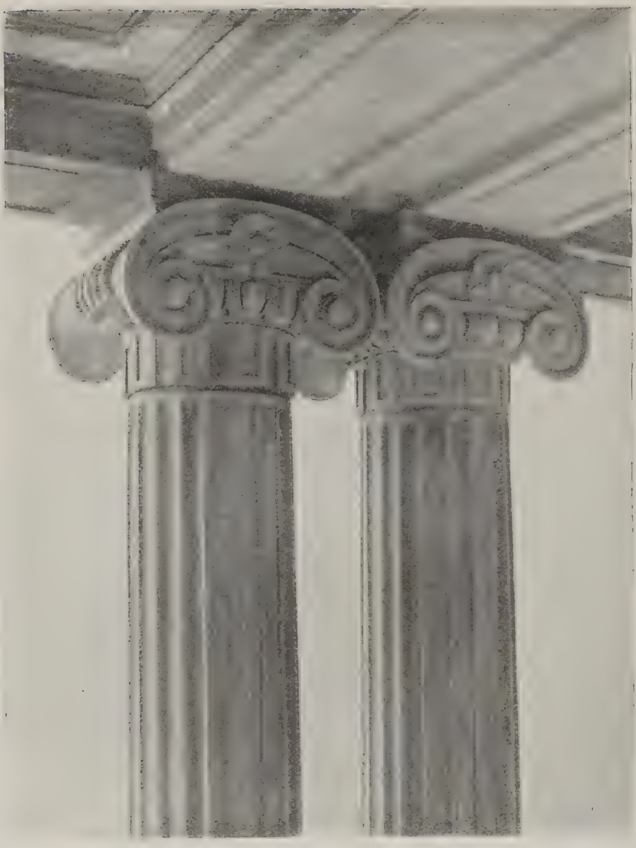
UR plate shows the principal façade of this now famous building, complete save for the main entrance, which lacks its glass hood. The origi- Adelphi Hotel was built in 1828, in a squat rgian style. In 1876 it was found necessary to ild it entirely, and after 1892, when it was acquired the Midland Railway Company, further additions e made. Between three and four years ago the ent reconstruction was begun. In design the new land Adelphi will rank among the most notable dings of this decade, and it has been universally aimed as the last word in hotel comfort. There are ral hundred bedrooms and private sitting-rooms, le the most important of the public apartments prise the main entrance court (see below), the ving-room and dining-room, the Hypostyle Hall, the room, and the extremely artistic French restaurant. Every bedroom has its own telephone, and is provided with double doors, while the heating arrangements are up-to-date and perfect. The general contractors were Messrs. William Thornton and Sons (Liverpool); the constructional steelwork was carried out by Messrs. Richard Moreland and Son (London); and Messrs. Henry Johnson and Sons executed the ferro-concrete floors and grano and ferro-concrete staircases, the fire and sound-proof partitions, and the fibrous and plain plastering. The sub-contractors included Messrs. Waring and Gillow, Messrs. Hampton and Sons, Messrs. Martyn and Co., and Messrs. Fryers, Ltd. The electric elevator installation was carried out by the Otis Elevator Company, Ltd.

The Midland Adelphi Hotel: Main Entrance Court.
R. Frank Atkinson, F.R.I.B.A., Architect.

The court is approached from the main entrance by a wide marble staircase, and leads into another court, called the Hypostyle Hall, at the higher end. Small raised balconettes are arranged on either side of the court. The pilasters are of brèche rose marble, and



MIDLAND ADELPHI HOTEL, LIVERPOOL: GROUND-FLOOR PLAN. R. FRANK ATKINSON F.R.I.B.A., ARCHITECT.



MIDLAND ADELPHI HOTEL, LIVERPOOL: DETAIL OF COLUMNS.

R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.

have gilt capitals supporting the ornamental frieze. The feature of the ceiling is the large panel in the centre surrounded with glazed lights. Messrs. Waring and Gillow were the sub-contractors for the decoration and furniture of this court.

British Museum Extension, Montague Place, London: Entrance to First-Floor Gallery. John J. Burnet, LL.D., F.R.I.B.A., R.S.A., Architect.

The new wing of the British Museum, known as King Edward VII.'s Galleries, was finished last autumn. There are two principal floors, corresponding to those of the main building, with galleries running the full length of the extension. The entrance to the lower gallery, which we show in our plate, is the keynote to the architectural character of the galleries themselves, which is in accordance with the severely classical character of the older portion of the Museum.

British Museum Extension, Montague Place, London: First-Floor Gallery. John J. Burnet, LL.D., F.R.I.B.A., R.S.A., Architect.

This gallery is being used temporarily for the Stein Collection of Eastern Paintings, but will ultimately house the glass and ceramics belonging to the Department of British and Mediæval Antiquities. The glass wall-casing, framed in dark mahogany, for showing these exhibits, divides the gallery into a series of bays on each side of the wide central space. It will be noted that there are no columns in the gallery except at the ends, where the pairs of columns are identical with those supporting the dome above the entrance detail shown in the preceding plate. The marble in this, as in the upper gallery, was selected for its appropriateness as a background to the ultimate exhibits.

Small Houses of the Late Georgian Period: House at Kennington.

The title of "Small Houses of the Late Georgian Period," under which this series of illustrations is issued, is used in a broad sense to cover the work fr about 1750 to about 1820. The house at Kenningt now demolished, is an example of one of the la houses. There are indications that the four pilast which can be seen on the ground floor of the cent part, originally formed, responds to columns carry some kind of light balcony or verandah. The co position of the central block, with the two side wi with their curved ends, with the central axis mark by the interesting little entrance gateway, is v effective.

Cottingham's Designs for Ironwork: Lamps a Candlesticks.

Most of us have encountered an extant specimen Cottingham's street lamps. The design shown on right-hand side of our plate is one of the most agr able of its kind. The shop lamps will be less famil but both these and the small branch candlestick pleasant instances of the artist's classic fancy.

The Palais de Justice, Brussels: Longitudi Section. J. Poelaert, Architect

Nothing need be added to what has alrea appeared in the Journal on the Palais de Justice (our issue of March 11th, etc.). The longitudinal s tion we publish as a double-page plate is a verita encyclopædia of architectural detail, which can har fail to interest our readers. We intend, from time time, to publish other drawings of Poelaert's mast piece, in the belief that it appeals irresistibly to lover of monumental designing and fine draughtsm ship.

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or o expressed by correspondents, who are asked to be brief, and to write on one only of the paper.

Outside Hoist Over Railway Siding.

To the Editors of THE ARCHITECTS' AND BUILDE JOURNAL.

SIRS,—On page 177 of your issue of 11th i column 3, line 13, a statement appears that "the s pressure across the grain of fir is only 175 lb. per squ inch of bearing surface."

This is probably a misprint. Rivington, Part 4, gi 12 cwt. per square inch as safe bearing stress on fi

In the next line, should not 1 cwt. per foot super. 4 cwt.? and on line 27 3 by 11 should obviously r 3 by 11^2. It would be interesting to know what f 13 ft. 6 in. span or even 11 ft. span would take 4 t per square foot. Inquirer probably means 4 cwt.

F

To the Editors of THE ARCHITECTS' AND BUILDE JOURNAL.

SIRS,—In reply to the above correspondent, wh letter you kindly forwarded to me, the safe press across the grain of fir is from 175 to 200 lb. per squ inch of bearing surface, with about 250 lb a maximum; the fibres begin to crush with anyth higher. The reference in Rivington deals with other matter altogether, viz., the bearing press against the end grain from bolts passing through timber, or similar cases. The other matters referre are misprints, 1 cwt. in sixth line, paragraph (2), sho be 4 cwt. and 11 in eighth line, paragraph (3), should 11^2. The original inquirer stated more than once t he wanted to provide for a load of 4 *tons* per foot su

HENRY ADAMS

SMALL HOUSES OF THE LATE GEORGIAN PERIOD.

SPECIALLY CONTRIBUTED BY STANLEY C. RAMSEY.

F all the arbitrary distinctions made in Archi-
tectural History, that period which we vaguely
know as the Georgian is the most difficult to
and define. The term may be used to mean
st anything, from the square type of simple build-
with heavily moulded cornice and deep tiled
ered roof without blocking course or balustrade,
acteristic of the early part of the reign of the first
ge, and scarcely distinguishable from its earlier
en Anne prototype, to the simple stucco fronts, such
e find in the works of Nash and his contemporaries,
ed out in the time of George the Fourth. The
ts of the earlier buildings, say, down to about 1750,
received ample recognition from recent writers on
itectural subjects, but their logical development,
h extended almost to the days of the Gothic
val, has been almost entirely ignored, and we have
most amazingly blind to much that is really
tiful, but which, owing to a curious fashion of
tly limiting our appreciation to those buildings
which precede some given year or approximation
me, come too late in our calendar of choice.

here have been, as always, certain exceptions to
logmatic generalisation ; individual architects such
e Adams and Chambers have from time to time
singled out for a somewhat grudging admiration,
the larger and more important works of these
itects are well known.

is, however, in considering the smaller buildings
date from the last half of the eighteenth and the
part of the nineteenth century, that one feels one
aling with a strange and little known phase ; yet
is scarcely a county town or village of any size
h does not number amongst its different buildings
example of the work of this period, and of which,
ugh we have seen them many times, we are for
nost part completely ignorant.

e know them only as we have known some
liar yet alien object in a street through which we
constantly passed ; familiar, in that we have seen
any times but unconsciously, alien, inasmuch as
o not really know it. Who amongst us has not had
experience? We may traverse a certain road
ly every morning of the year, and we feel that we
v every detail of every building in it, when on
particular day a knocker will attract our attention,
may be a fanlight or even a whole façade, which,
ugh we had passed it on many previous occasions,
ad never properly observed till then.

it seems to me it is with these houses ; we meet
at every turn, they crowd amongst our most
liar associations. Perhaps it has been this very
liarity which has bred this indifference, but there
are, quiet, retiring, unobtrusive, and to my mind
ly delightful.

ey are the product of a different age from that in
h we live, an age that had some regard for the
s and amenities of social intercourse, a time of
re and of manners, but a period not without its
ations. That industrialism, which is to so many
e intellectually elect an accursed thing, which in
sults has given us wealth, science, and opportunity,
eginnings of a civic conscience and a high though
l endeavour, had yet to come into being. During
ast century we have gained much, but we have
lost much. We are full of business, eager, insistent,
onscious, and always in a hurry ; our arrange-
s and designs are without order, we have dulled
erceptions by our furious rate of living, we have
andard of taste by which to try our likes and dis-
; in a word, we are almost entirely deficient in the
ty of criticism.

The distinguishing traits in the small houses of the late Georgian period are a sense of order and proportion. They are in the true meaning of the word elegant : nothing is left to chance, all is considered even to the minutest detail, and together with all this there is a wonderful variety in their design, a wealth of invention and a fertility of imagination, the manifestation of which is only possible when the canons and fundamentals of an art are recognised and completely accepted. In the limitations of his style the artist finds true freedom for his efforts, which for want of definite guiding principles of an accepted convention may all too easily be wasted in a vain striving after a false originality, and his time frittered away in a pursuit of a vain and elusive interest. At a time like the present, when there are signs of a renewed activity in house building on all sides, a study of these late eighteenth century houses may be both interesting and instructive.

We do not all wish to live in the typical garden village cottage, charming as many of them are : we are not all fitted for a rustic and primitive existence, and our tastes require that we shall be housed in something more in accordance with the requirements of a later civilisation than these cottages represent.

Indeed, the beauty of many an English village will be found to depend on a consistent development, resulting in a variety of types, due to the different periods of building, rather than to the variations produced by different types solely of one age. Whether it is possible or even desirable to reproduce all the features of such a village, much as the making of an exact copy from the antique, it is beyond the province of this article to discuss ; but if an understanding of what constitutes the total effect of our villages and small towns is desired, then it is contended that some amount of attention should be paid to the later as well as the earlier work.

In visiting many of our garden cities one cannot help being struck with the restlessness and lack of repose in a good deal of what we see ; in places there will be found a wild riot of gables, or an undue emphasis on chimney stacks, together with a baldness of detail which—by comparison with the quiet and harmonious buildings of the more traditional villages, in which cornice and eaves give lines of a predominant horizontality—create a feeling of disturbance and unrest.

This general statement is true only to a limited extent, as no one is better aware or more appreciative than the present writer of the large amount of good and altogether admirable work that has been carried out in our garden cities ; and what is said must be taken as a criticism of certain tendencies which if not carefully considered may carry us further and further from the true ideal, rather than a direct attack on garden city architecture. In all styles of building there are two chief sources of interest, the one arising from control and consideration, the other being the outcome of accident and more in the nature of a surprise.

These houses of the latter part of the eighteenth century are essentially formal in type, though not always in the disposition and treatment of their parts, whilst there is scarcely a building so entirely formal that it does not in a lesser or greater degree owe something to that which is incidental. On the other hand, where large areas are being built upon at one and the same time, and the treatment of each building is separate and individual, the total effect must owe much of its success or failure to causes which are in the main accidental.

It is between these extremes in principle—of formality which carried to excess produces wearisome repetition and informality, the over application of which means confusion and anarchy—that the happiest results are obtained. In the study of the buildings which form the subject of this series, we shall observe a happy blend of both the formal and the informal, though this informality cannot in the majority of instances be said to be altogether the result of accident, but is rather due, if the phrase be permissible, to a considered carelessness.

Thus we find the most severe and uncompromising of elevations set off with a slight trellis porch or verandah, treated with the greatest possible freedom; or a weatherboarded cottage having windows and entrance door carried out with the most perfect precision. Apart from the interest inherent in the designs, we cannot be indifferent to the excellence of the craftsmanship displayed in the details of the work. Architect and artisan would appear to have worked in complete accordance the one with the other and the conceptions of the former have been carried out with faultless execution by the latter.

HERE AND THERE.

I THINK it is Byron who speaks somewhere of the mildest-mannered man who ever scuttled ship or cut a throat, and it would appear that such a description aptly describes Mr. March Phillipps in his performance at the Institute last week. I was not myself present at the meeting when the paper on "Borrowing in Architecture" was read, but a friend gives me a fair account of it, and, basing an opinion on the information so supplied, I should like to take this opportunity to compliment the Institute Council on the catholic spirit they displayed by inviting so hostile a critic to come among them, and, more especially, to congratulate Mr. March Phillipps for his pluck in not only accepting the invitation with alacrity, but also for giving such a brilliant exhibition of dialectics in the very camp of the enemy, and crowning everything by showing lantern views of architectural achievements by Fellows of the Institute, to the accompaniment of frank and ironical criticism! Moreover, Mr. March Phillipps appears to have done it all so extremely well, with complete suavity of manner, and if architects present had not been professionally concerned in the matter they might almost have passed a vote of thanks to the lecturer for so felicitously pointing out their misconceptions, and estimating modern work as very paltry stuff indeed. He said that as he walked down Parliament Street among the Government Offices, or looked at the pilasters of some great modern Corinthian structure, he seemed to be invaded again "by just that consciousness of the unutterable deadness of the thing looked at as I felt when I watched the ruins of the Roman temples on the edge of the Sahara," and he politely ventured to incorporate in his peroration the following: "It is easy enough, when your profession is large enough to generate its own praise and blame, to find that praise and blame sufficient; to forget how much more than merely professional a living art always is. I have known more than one architect enthusiastically sure that he was engaged on vital works of art, and all the time I knew—I could not *help* knowing—that he was only engaged on professional experiments." An outsider present at the meeting would have admired the way in which Mr. March Phillipps handled his subject, and might have said that he achieved a personal triumph. Certainly it is regretted that the lions present made such a meagre show at eating him, politely, despite the fact that so much pepper and salt had been provided. Even Mr. Blomfield, who is a great critic, simply contented himself with taking up a few points, leaving the main thesis untouched, and expressing his total disagreement with the lecturer's history and his philosophy. Professor Lethaby subscribed to t
assertion that architecture to-day was chaotic; M
Edward Warren tinkered over a few details; a Fell
with a brilliant gift for design lessened the effect of
remarks by imputing, rather bluntly and angrily, th
the lecturer didn't know what he was talking abou
while Mr. Lanchester declined to say anything mo
about those warlike enrichments on the Wesley
Hall which Mr. March Phillipps had said were t
very things that John Wesley was always immens
interested in!

My own views of the matter are on the side of t
architectural angels (professional). I am quite oppos
to Mr. March Phillipps's notions, and cannot for t
life of me see how the architect is going to "st
afresh." It is all very well to talk of how the Roma
spoiled their own Colosseum by plastering the exteri
with meaningless "orders," and convincing enough
take an illustration from Druidical times, showing h
"as reason grew, as the fog of ignorance lifted, and t
mental image of the forces at work shone clearer
men's minds, so out of the rugged Stonehenge bould
the forms of column and architecture slow
emerged": but all this leads us not a step further
the world we are confronted with: for, above all thing
the architect should be a designer and constructor, n
an historian, a litterateur, nor an archæologist.

Admitting that mere borrowing is a poor busine
however skilfully done, it is quite impossible to thr
over the inheritance of the past, and to evolve som
thing out of the depths of one's ignorance. The *a*
nouveau enthusiasts went along that line of develo
ment, and they gave us something entirely mode
but it was far more iniquitous than the most flagra
borrowing ever accomplished. In this respect I thi
Mr. March Phillipps is entirely mistaken, just as he is
his notion of what the British workman could acco
plish if only he were allowed to evolve something o
of the conditions of the work before him; but I admi
nevertheless, the way in which he put his tenets f
ward, and I add this humble tribute to the delight
manner in which he confronted architects on th
native heath.

* * * *

The recent opening of a certain large building,
which ceremony I was present, offered a very striki
example of the rush and tear which often occur
connection with the completion of a modern und
taking. It would seem that there should be no r
occasion for this, if only the building owner did n
ask for things to be accomplished within an alm
impossible period, or the architect did not delay to g
out his details to the sub-contractors in good ti
When one thinks of all the "speeding u " that acco
panied the completion of such a building as the Lond
Opera House, now remaining empty and unus
month after month, the fatuousness of the task beco
depressing. Moreover, this racing at the eleventh h
cannot conduce to good work. To my mind t
remarkable thing is, not how badly but how well so
of the work is done by sub-contractors pressed for th
life to get things finished by a certain day and ho
There is, however, no complete satisfaction in th
matter for anyone concerned. It is a bad feature
the times, and one that we should endeavour to eli
nate rather than to foster.

* * * *

From the time when the Housing and Town Pla
ning Act was first mooted, every speaker and writer
the subject has found it impossible to go very far wi
out introducing "amenities," and so frequent has be
the repetition of this awkward word that the mere sig
of it is ominous. It is the favourite term of those w
have nothing to say about town planning, and can't s
it. Will not some beneficent person search Roge
"Thesaurus" and give us a few alternatives?

UBIQUE.

MODERN ARCHITECTS—INTRODUCTION.

SPECIALLY CONTRIBUTED BY A. T. EDWARDS, M.A.

O attempt will be made here to write a comprehensive account of the achievements of modern architects. Only a few will be considered, and f these belong to the last century. Not that it d be unprofitable to pass under review the great er of buildings, both excellent and otherwise, are now being erected; on the contrary, in an ike our own, when there are so many "creators" so few critics, such a review would serve a most l purpose. But even if the present writer were lly endowed with superhuman powers of judg-, it would be a difficult and invidious task to out practitioners of to-day as the subjects of al study, to declare the names of the half-dozen men who, above all their contemporaries, are to advance the cause of our art; for, however lly these half-dozen people were chosen, however representative they were of the best talent of our their names would excite a certain amount of pre- e and animosity which would be a hindrance to reation of that particular unimpassioned atmo- e where the spirit of criticism can most easily ; hence, it would not be an advantageous course lude them among the group of eminent men to e work the following series of articles will be ed.

on what principle, then, have they been chosen, what title have they to be considered modern? were chosen because they were brilliant expo- of the Classic style. In fact, it is the Classic rather than any special person or group of persons s the real subject of the present discussion. These ects are still modern, because they adopted a er of building which is even more prevalent y than it was in their own life-time.

ere are several ways in which this matter of style e approached. The historian, by taking a pur- of a long series of events, is able to watch the of circumstances or conditions upon the develop- of architectural forms. His authority is derived the fact that he never for a moment permits him- o depart from reality. Instead of saying after anner of a speculator or doctrinaire that a certain e may or ought to take place, he is able to inform initely that a particular modification of forms did lly take place, and our æsthetic insight is red by our ability to find a satisfactory explana- f that phenomenon. But the study of history can be a substitute for that hard abstract thought is the indispensable preliminary of all artistic on. It is interesting to trace various principles gh a number of instances where they have been ssed, but there would have been no intelligible ct-matter for the historian at all unless the archi- of the buildings considered had themselves, in a n measure, been animated by the principles in ion. No one can expatiate upon the effect of e or materials on architecture unless at all periods have been architects sensitive enough to allow influences to have a due effect upon their works. elements of design itself history tells us nothing, t is notorious that the ancient Greeks, among there were so many artists of the first rank, owed to its teaching. In fact, some histories of art to have been written for the express benefit of ry stupid of the people who, incapable of reason- emselves, can only be convinced by authority. is a kind of person who is unable to arrive at isions by logic alone. It is for such that the led empirical method of teaching geometry was vented. The pupil being apparently unable to the truth of the general proposition that the opposite sides of a parallelogram are equal, he must cut out dozens of card-board parallelograms and measure their sides with a tape. But the proposition is not made in the least degree more secure by this laborious process. Similarly to a logician, an æsthetic principle is not more firmly established when exemplified in buildings of the past. The real function of history is not to enlarge the understanding, but to inspire self-confidence and courage. In the tenth century of our era there must have been many Italians who in intellect and temperament were akin to the citizens of Athens or of Rome, but in the prevailing atmosphere they dared not reveal themselves. They were even taught to despise their own natures and to call them horrible and depraved. The Revival of Learning came and the splendour of ancient civilisation was declared; and as soon as men apprehended the fact that there had been great and glorious periods of history, when liberality of mind was not counted a crime, then they knew that they were not really deformed or eccentric persons, and were bold enough to give full expression to their personalities. It was not so much that their opinions changed, but for the first time they had the courage of their opinions.

In the following articles devoted to a consideration of the Classic style there will be no appeal to history or to tradition. Such an appeal is not an argument at all, and those who make it bring upon themselves the just contempt of their Romantic opponents. The man who blindly pins his faith upon any single tradition is rightly called a mere copyist; for there is a variety of traditions, and it is necessary to choose between them. The Gothic Revivalists appealed to tradition, and they cannot be refuted by critics who have no rational standard of judgment. We are sometimes told that if we neglect tradition we have no secure basis for our art at all, and that our work will be the result of personal caprice. But there is one thing more stable than tradition, and that is reason. Then, are we to begin with a clean slate as if nothing had ever been accomplished before? Does not this lead to *l'art nouveau*? In answer to these questions it may be said that there is no need to be afraid of reason. It is only by strict reasoning (such as the advocates of *l'art nouveau* have never yet practised) that the function of architecture can be apprehended, and it has yet to be proved that the main features of the Classic style would not be reconstructed by this same process. The remarkable race that in the brief period of its prosperity laid the foundations of European culture, marking out for the first time the main divisions of politics, science, and literature, also brought order into the realm of art and freed architecture from the extraneous elements that in less intellectual ages have prevented us from understanding its real nature.

But, however admirable are the architectural forms which the Greeks established, it is possible by misapplying them to bring these forms into great disrepute. The use and abuse of the Classic style are the subject of endless controversy. We shall attempt a critical analysis of the work of some architects who have pondered deeply upon this matter. It is conceivable that from their precepts and practice we shall be able to learn something definite, some sure principles which, while giving further stability to the Classic style, will yet extend its resources.

The architects will be considered in the following order: Soane, Smirke, Thomson, Von Klenze, Schinkel, Vandoyer, Duban, Labrouste, Ginain, and Duc. Their main buildings will be reviewed, and also their lives, but in no anecdotal spirit. It is intended rather to discover what message have they for the present age.

BORROWING IN ARCHITECTURE.

BY L. MARCH PHILLIPPS.

LECTURING at the Royal Institute of British Architects on the evening of March 23, on "Borrowing in Architecture," Mr. March Phillipps said that borrowing was carried on nowadays on so extensive a scale that it might be said almost to constitute itself the art of architecture. What, to begin with, did the word "borrow," applied to architecture, mean? In a recent newspaper controversy he had found it often used as if it meant the same thing as assimilate. All the best builders, it was said, had borrowed. But as a matter of fact the vital styles had never borrowed. They had assimilated—that was to say, made like to themselves—foreign bodies which had lost their own identity more or less in the process of absorption and gone to nourish and strengthen the assimilating styles. The thing borrowed was not assimilated at all. One could see how this applied to architecture. Architectural features which had been assimilated had been so much food to the assimilating style. Architectural features which had been borrowed remained mere foreign accretions stuck on, and so far from nourishing anything, they had always tended to cripple and weaken the vitality of the style they were affixed to. Finally, if they came in sufficient numbers they killed the existing style outright, and then they proceeded to form a style of their own, composed altogether of borrowed features, in which the principle of life was extinct.

Proceeding to discuss the borrowings of Roman architecture, Mr. March Phillipps resumed:

The Borrowings of the Romans.

Typical Roman buildings are made up of a core of masonry which is Roman and a veneer of marble which is Greek. The Roman core is arched, the Greek veneer trabeated, and it is these two principles which are irreconcilable and mutually destructive. They are irreconcilable, mind, not only outwardly and apparently, but inwardly, in what they are doing and in the force they are exerting. They represent respectively the active and passive principles in construction. The arch is active because the pressure upon it is not communicated direct to the ground, but is translated into lateral thrust, as it is called. I am explaining this for the sake of those here present who do not belong to the building profession and may never have thought of the point. A great arched building, a S. Sophia or a mediæval cathedral, is a composition of activities. It is all made up of the invisible pressures and thrusts and counter-thrusts of the arched vaults of nave, aisle, and choir battling together, and for all it looks so rigid is inhabited by forces which would burst it asunder like a lyddite shell were it not for the fact that they are matched to hold each other in check. That is the idea of arched construction.

So the hope of development of any structural principle lies in keeping that principle pure, which is exactly what the mixture of Roman and Greek ideas renders impossible. These Greek borrowings, which adhere to Roman arched work, and in the Parthenon encase it with a rigid strait-waistcoat of rectangles, are irreconcilable in character with the Roman structural idiom. What those forms were capable of in Greek hands is not to the purpose. In Roman art they represent the corruption of all that was healthy and genuine in it. "To some," says Sir Thomas Jackson of Roman architecture, "its utilitarian element may appear to degrade it to a lower level than that of Greece." Personally, the utilitarian element is about the only thing in Roman architecture I admire, and I admire it because it is the only thing that is really Roman.

Roman Artificiality.

What happened to Roman architecture? The Romans never spoke out, never dared to be themselves, in architecture. And for its untruth to itself their architecture paid the penalty in the growth of a style of quite evidently artificial composition, a style which ignores the creative instinct altogether. I remember at Sbeitla, in North Africa, where the remains of a Roman town overlook from the slopes of the Atlas the vast distances of the Sahara, being extraordinarily impressed by the mechanical and Juggernaut quality in this architecture. Here, in this strange, remote land of palm and desert and fierce sun, here were the same old temples and triumphal arches, the same old capitals and entablatures and egg-and-dart mouldings and acanthus leaves all cut to the same pattern which had become a kind of architectural routine all over the Empire. And on the edge of the Syrian desert it is the same, and all over Europe. Wherever the eagles went they built their eyries to the same pattern.

These, then, are the two points which I believe are most noticeable about Roman architecture. First, that the system of borrowing which Rome adopted tended to stifle the exercise of the national creative instinct; and secondly, that as a consequence of this, that system tended to develop itself into a style, imposing enough in scale and magnificence, but essentially formal and mechanical; a style cut off from life, not recognising the life around it nor recognised by that life.

English Renaissance.

This is the first great example of borrowing which we have to notice. And now I come to the second instance. This is the Renaissance. I shall deal with it only as it affected England, and I shall ask you to let me go back a little and examine the pre-existing state of things, because it is essential, if we would realise the influence and effect of the borrowing process, to appreciate first the nature of the existing style in England and its relation to the life of this country.

But it is necessary to bear in mind the great silent revolution in thought and in ideals which was taking place in the fifteenth and sixteenth centuries in England, and which was itself effecting a like revolution in the national style of building. Illustration is always the quickest explanation, and a glance at a pure Gothic structure will save many words. [Slide.]

Everyone has felt the character expressed in this kind of architecture. The spiritual fervour, the rapture of adoration in which the style is steeped, still appeal forcibly to all of like temperament. It is still the religious style par excellence, and that not because of its past association, but because naturally and instinctively people recognise in the upward rushing lines and ribs of stone a visible incarnation of the dominant spiritual impulse. As it stands, the architecture is a perfect expression of the life of its age. Nothing can be more vivid than that expression of life, but turn a century or two and y
will find both the life and the expression
it changing. Authority and importan
you will find, are in process of shifti
from knight and monk to hard-head
business men, yeomen, and tradesmen.

Now let me ask you, looking still at l
and not yet at architecture, what will
the needs in building of the new societ
The old spiritual fervour has gone out
life; therefore the passionate vertical
which in architecture embodied that ser
ment must go too. What will take its plac
Figure to yourself the life of that age,
human interests, its sociability, its ci
pride and well-being, its growing rega
for comfort and convenience; of cour
what is wanted in the new architecture
suit the new mood is breadth, amplitu
spaciousness. This was what the men
revolution we have been describing me
to art. This was the demand it made.

The Arch and the Vault.

And you know how it was met. I v
mention but two of the main construct
features of the new style: the arch and
vault. The tall, pointed arch was b
over at the shoulder to form the h
zontal Tudor arch, while the steep va
were flattened and their ribs spread out
concentric circles, like ripples on sand,
form the vaulting which we know as f
tracery.

These were the methods, bold, sim
reasonable, which our English build
proposed for meeting the new situati
and it is remarkable that the obstinacy
the national character and the pertina
with which it stuck to its own metho
did enable it to do here what was done
where else in Europe—namely, to evo
a northern style of Gothic on horizor
lines—that is, on Renaissance li
Tudor is northern Renaissance. It
that is to say, the mundane spirit expr
ing itself in terms of northern art, an
constitutes, as it seems to me, by far
most definite and important contribut
that England has ever made to the hist
of architecture.

The Second Great Borrowing Epoch

We have now reached the point wh
the second great borrowing epoch beg
You will see that there is one differe
between it and the same point in Ro
history which is worth noting. I s
gested that the Roman borrowings c
cealed, and at the same time hindere
genuine Roman style. That is, I thi
true; but how far such a style was orga
and how far only rudimentary is matte
speculation. In the case of England i
not matter of speculation. At the t
our borrowing began there was, as
know for a fact, a native style in full bl
a style which was answering the new ne
of life adequately and vigorously; a s
which justifies its claim to the title of s
by the consistency and coherence of
constructive expedients. There can be
doubt that for once in a way, in the
velopment of this new style of h
England's proverbial inaccessibility
ideas stood her in good stead. All
time she was working out her own s
tion she was keeping another at bay.
effected something, as we have seen.
really did construct the only north
spacious style that ever has been c
structed. But the invader was too str
for her, the Italian ideas crept in.

struggle was between those two acteristic structural features, both zontal in their nature and in each of h is contained the germ of a style, Tudor arch and the Latin architrave. ere, then, we stand at what journalists the parting of the ways: with a self-ted national style behind us and a bor-d one in front.

Greek Mental Lucidity.

was in the Greek world, remember, in the Roman, that their reigned that ect mental lucidity which is the thing eat price in the classic epoch. People impressed by the idea that the Greeks v what they were about, that they had ons for doing what they did. This, u know, is the rarest possible thing in to have *reasons* for doing anything; the perception that the Greeks had ons impressed everyone very much. he Greek prestige spread, and it was prestige which brought about the in-uction of Greek structural features. y were held to be the mark of a supe-culture, and it was a sign of refine- and an enlightened education to in-e them.

The Coming of Classic.

ord for word that applies to the ng of Classic into England. The e English style had no use for the was totally incompatible in character it, never did even attempt to assimi-it. But it came backed by the pres-of Italian ideas and Italian culture, the whole weight of the Renaissance d it. It became in consequence the in English aristocratic circles. I ure no one can study Roman architec-—chiefly certainly in its great build-its temples and amphitheatres and es, but also to some extent in its villas fashionable towns, like Pompeii—ut realising how very much a matter tomatic routine the art had become. not only that the same designs are astingly repeated and the same struc-features and the same ornament and ation perpetually reproduced; but ctual work itself, the cutting of the dings and sculpture of foliage, hair drapery, is so lifeless and automatic ost indubitably to suggest a style has been sapped of all inward growth vitality.

rliament Street and the Sahara.

would be a long and difficult task to the parallel influence through Eng-rt. I shall not attempt that task, but leave it to your consideration. It is al, mind you, that large importations reign forms should end in this, and ere not signs round us that our large rtations of Classic forms are drawing that direction; that that is their bias? alled just now the feeling I had at la and elsewhere of the incompati- of Roman work with any kind of n regard or interest; of its evident separation from human life. Well, times, walking down Parliament t among the Government offices, or ng at the pilasters and pediments of great modern Corinthian structure, I to feel over again the same emotion, ind seems to be invaded again by hat consciousness of the unutterable ess of the thing looked at, as I felt I watched the ruins of the Roman es on the edge of the Sahara.

there not this tendency in modern tecture; this tendency to make, as it an artificial style out of the alien we have amassed?

Constructive Truth.

I pointed out in dealing with the false construction of the Romans, that the only thing which in the long run keeps architecture straight is constructive truth. Where and of what kind are the stresses and strains and pressures of the structure? Let them speak. They are the architecture; and the clearer they speak the more articulate will the architecture become.

Referring to Roman concrete, Mr. March Phillips said that we, too, had a wonderful concrete, and if it was good building material, it was good architectural material. Indeed, it is evident at a glance that both structurally and in the chances it offers of surface decoration it has great opportunities. What hinders it? Why, the misapplied borrowed features with which it is encumbered—features which because they are shams, pretending to structural uses which they do not really perform, can come to nothing themselves nor suffer the real building material to come to anything. We do not dare to speak out in architecture, to take simply our material and our necessities and fit the one to the other. We are afraid of being ourselves, and we are paying the penalty that Rome paid long ago, in the rise of an official and stereotyped style cut off from human interest and from human life.

"The Last and Deadliest Danger."

I will venture to tell you in three words where, in my humble opinion, the risk lies. The Classic style is admirably adapted to the setting and solving of intellectual problems. Its values are definite, and the very fact that it is not mixed up with any vulgar sentiment of any kind makes it all the better vehicle for technical calculations. It is, in short, a first-rate professional medium. Besides that, the architectural profession itself is a big one. There are thousands of architects, quite enough with their schools and institutes and newspapers and associations, to form a consolidated body of opinion. Is it not easy to conceive such a body armed with expert and exclusive knowledge, running architecture on a professional basis with Classic as its professional style? That is the danger. It is easy enough, when your profession is large enough to generate its own praise and blame, to find that praise and blame sufficient; to forget how much more than merely professional a living art always is. I have known more than one architect enthusiastically sure that he was engaged on vital works of art, and all the time I knew—I could not *help* knowing—that he was only engaged on professional experiments. No one who has ever felt what the art of architecture has been, and may be, and ought to be, to life, will say that this danger—the danger of the art becoming professionalised—does not exist at present. It exists. It is the last and deadliest danger that follows on the adoption of borrowed forms of architecture.

DISCUSSION.

Professor W. R. Lethaby, proposing a vote of thanks, said that while congratulating Mr. March Phillips upon his paper, he had also to congratulate the Institute upon its liberality of spirit in asking him there. He agreed with much that Mr. March Phillipps had said. The style of Rome was a Juggernaut style—simple, brutal, and rude. But there were many who loved it and would impose its tyranny upon us. Much, however, that Mr. March Phillipps had said was sheer Ruskinism, and that had all been proved wrong a dozen years ago. It should not be forgotten that architects were part of life, and could not go out of their environment. Architects were changing all the time. They were a composite body with consciences divorced from their needs. If Mr. March Phillipps would alter the life outside he would be surprised how quickly architects would respond to the new conditions. It was the deadness of town life that produced the deadness of architecture.

Mr. E. B. Havell, seconding the vote of thanks, said he thought that Mr. March Phillipps's main argument was quite incontrovertible. The whole architectural system was based on borrowing, which was as prejudicial to the health of artistic growth as persistent borrowing from one's neighbour was contrary to sound domestic finance. English architects were the victims of a pedagogic tyranny. When the classical obsession was relegated to its proper place, then would the artificial barrier between the architect and the craftsman be removed.

Mr. H. V. Lanchester said the question apparently was whether we were not altogether wrong in following the tradition of the Renaissance and had not better go back to the Tudor tradition. If we were going back to the Tudor tradition were we satisfied that that was better than what we were doing at the present day? He very much doubted it. The Tudor style did not represent the soul and spirit of the age anywhere near so well as the work done during the last two centuries.

Mr. Edward Warren said that porches, chimneypieces, and a few misunderstood arabesques did not convert Gothic architecture into anything like the Renaissance. The four-centred arch, too, was nearly as squat in the fourteenth century as in the fifteenth, and did not come as a late fifteenth-century invention.

Mr. H. G. Ibberson said it was obviously impossible to escape from our own age, and due allowance should be made for the present extraordinary jumble of ideas. Therefore some sort of tradition must be set for the guidance of students in place of the contradictory dictates of individual architects. They wanted not so much a point of concentration as a point of departure.

Mr. Widdows said the evil genius of the architect had always been the literary man. At the time the Romans were building their aqueducts the literary man discovered that true art was to be found in Greece. Later, the literary man unearthed the beauty of classic writings, and then came the Renaissance. Later, in our own country, we seemed to be getting along quite happily, following in the style of Wren, when the Oxford Movement arose. If architects only did what they pleased, instead of doing what they were told to do by the literary men, things would go all right.

Mr. Bailey pointed out how through all periods the predominance of the Classic style had coincided with great material prosperity. To-day the outbursts of Classical feeling had their origin in the worshipping of wealth for wealth's sake, and so the creative genius was stifled.

Mr. A. E. Richardson said he had not heard from Mr. March Phillipps one word in refutation of borrowing. It was all borrowing and would be so until the end of the chapter. Mr. March Phillipps had failed to upset the theory of academic composition. Architecture was an academic art, and relied to a great extent upon composition. He was confident that the Classic tradition of the future would be even greater than that of the past.

Mr. Reginald Blomfield said they had

had a stimulating evening. Mr. March Phillipps had come down partly as a picador to stick quills into the mad bull of architecture. But, speaking for himself, he felt totally unrepentant; he felt content to have the "lie in his soul." He did not agree with Mr. March Phillipps in his history or his philosophy, so he differed *toto cœlo*. The lecturer based his criticism of modern architecture on axioms, or, rather, impressions. One of these was that no architecture was sound unless the structure was visible. He had never quite reconciled himself with the belief that the whole of architecture was wrapped up in the visible expression of construction. He thought that the problem of architecture as an art consisted in the grouping of features; that was what they meant by spacing, proportion, mass, etc.—nebulous terms though very real at the basis of architecture. Referring to one of the illustrations Mr. March Phillipps had shown upon the screen—the roof of the Divinity School at Oxford—Mr. Blomfield said the pendants were a mere mason's trick and nothing else. The thing had been done until it became quite ridiculous. Mr. March Phillipps, he continued, had laid it down that it was impossible to combine the arch and the lintel. He thought that any practical builder would say that was precisely what one wanted to do. The combination of the arch and the lintel was one of the most effective weapons of modern architecture. Gothic architecture had been praised for its spiritual forms, but he did not know how any one form could be more spiritual than another; the Early Christians worshipped in catacombs! Mr. March Phillipps had also referred to the "upward rushing rib," but it should be remembered that it was also a downward rushing rib, and was therefore as likely to lead to Hades as to heaven. English architecture did not end with the Tudors. It was not to be supposed, for instance, that anybody in the world could hope to wipe out St. Paul's. That was one man's work, and the result of a great creative impulse. Had architects only been allowed to continue the development of the Georgian style they would not be where they were now. It was the literary man who took control of architecture; but architects were getting back their own.

Mr. March Phillipps Replies.

Mr. March Phillipps, in reply, said he felt disappointed. He had particularly set his heart on converting Mr. Blomfield, but had failed. There seemed some misapprehension with regard to what he had said about the Tudor style. He had not the slightest wish to rake up any dead style. What he wanted was a return of the days when men faced their work honestly. He was thinking particularly about reinforced concrete—a splendid material which, if faced in an honest spirit, possessed great possibilities from the architectural point of view. With regard to the point about the upward rushing line, everybody could ascertain by a practical test that the eye would never rush down a vertical line, but always up. The Renaissance, he continued, was adapted to the aristocratic taste and was above the comprehension of the ordinary man. But, he said, Classic art could not endure; life was abandoning it. Something quite different was arising —a broad, general sense of human existence. The transition of things generally was from the aristocratic to the democratic, and when the workman could again take a pride in his work, labour would be ennobled and strikes would cease. In the new life was coming a strong democratic spirit to inspire the art of the future.

BOOK NOTICES.

A Practical Historian.

A history of the world's architecture in one moderate-sized volume is a task of sufficient difficulty to daunt any author who knows what it entails. Mr. Cross, greatly daring, has attempted it, and by employing a method of arrangement that makes for brevity, has achieved a large measure of success. Complete success is well-nigh impossible. Architectural history is too closely related to political, social, and religious history to be handled as a thing apart from these cognate subjects; whatever sacrifice has to be made to bring the book within the assigned limits, the sacrifice of some account of the conditions in which the architecture of various countries and epochs has been produced, cannot be entertained if the work is to be of value to its readers. No one has realised this more clearly than Mr. Cross, and he has given us accordingly what may be fairly described as a thoroughly comprehensive survey. His method, it is true, has its drawbacks; it tends to produce the appearance, if not the actuality, of scrappiness; the necessity of some of the matter is not always self-evident; the system of paragraphs gives an air of disconnectedness that is, perhaps, more apparent than real. On the other hand, we can think of no better method that would fit the circumstances, and it is at any rate carried out consistently throughout the volume, to the great enhancement of its lucidity as a work of reference. Moreover, if the text, historical and architectural, had been done only half as well as it has been done, the book would still be extremely valuable for its illustrations. These are extraordinarily complete and instructive; the photographs give us an admirable selection from the finest buildings in the world; the plans are well-nigh invaluable to the student; the countless details of columns and entablatures, mouldings and ornament, the satisfactory colour reproductions, would recommend the book if there were nothing else.

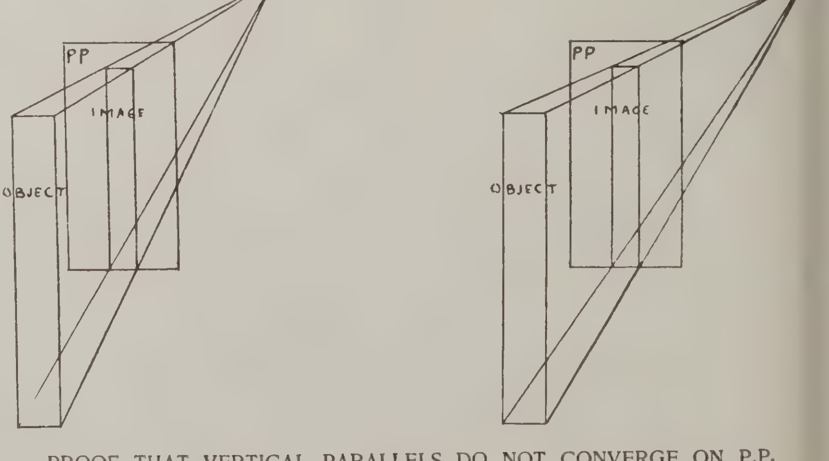
Mr. Cross begins with Egypt, Babylonia, Assyria, and Persia, and following the customary—and inevitable—line, proceeds thence to Greece and Rome. His sections on the domestic architecture of the Greeks and Romans, partly speculative as the subject is, will be read with avidity by those whose acquaintance with Classic architecture has been mainly confined to temples and other public buildings. This concludes Part I. Part II. deals systematically with the main periods of architecture—Byzantine, Romanesque, Gothic,
Renaissance—and the manifestations
these movements in different countri
showing the several branches that spra
from the parent stems. The "revivals
of the nineteenth century, reserved for t
end of the book, are treated very tersel
indeed one gets the most fleeting
glimpses of such modern phases as t
Gothic outbreak in England or the Gre
revival under Von Klenze, in Munich. Y
considering the book is elementary in pu
pose, this very brief treatment of mode
architecture is, perhaps, just as well; b
sides the illustrations supply, for him w
has eyes to see, a good deal that the te
leaves unsaid. On the other hand there
matter that one would hardly expect
have the right to hope for in an elementa
book. We especially commend the a
mirable chapter on Renaissance doorwa

Somebody has said that an historian w
has no bias is no historian; but the rema
needs considerable qualification in rega
to a book such as this—a book that s
out to impart facts and not opinio
Mr. Cross has preserved a strict imp
tiality, and in this sense there is very lit
of himself in his work. But what
book lacks in piquancy on this account
fully atoned for by its essential fitness
its purpose, which is to tell the youn
student the facts that he ought to kno
and to leave him to draw later, in the li
of his maturer knowledge, his own c
clusions therefrom. Meanwhile, he
test his knowledge by the examinati
questions printed at the end of the volu
We would add that a bibliography, wh
the books lacks, would have helped him
improve it.

"History of Architecture." By Alfred W. S. Cr
M.A., F.R.I.B.A. I.C.S. Reference Library. Publis
by The International Correspondence Schools, Lt

Perspective by Stereoscopic Diagram

Students will find this pamphlet, w
the fifteen stereoscopic diagrams t
accompany it, a very useful introduct
to the study of perspective. The dra
ings give the effect of solid models ill
trating the general principles of perspecti
parallel, angular, and oblique; and the
planations of them are given very clea
and concisely in five short chapters,
titled respectively: "Definition of P
spective," "The Point of Sight," "
Measuring Points or Points of Distanc
"Angular Perspective," and "Obli
Perspective." It will thus be seen t
while the work is ostensibly elementa
it is also extremely comprehensive, co
ing as it does virtually every phase of p
spective that the average draughtsman
called upon to deal with. Incidenta



PROOF THAT VERTICAL PARALLELS DO NOT CONVERGE ON P.P.

author removes one common misap- ension with regard to convergence. is often assumed by a student that, ıe more distant parts of parallel lines erge, there ought to be convergence on picture plane (*i.e.*, that part of the r on which a perspective drawing is e) of parallel vertical or horizontal , the extremes of which must ob- sly be further from the eye than the s near the line of sight. It is even gined by some students that in strict- some convergence ought to show—say, ıe two parallel sides of a tall upright nn—on the picture plane, and it is osed that it is too insignificant to de- d practical attention. If this were erspective would be far from an exact ice. Fig. 8 (which we reproduce) show where the fallacy lies. Treat- the picture plane as a transparent of glass, it will be seen by the ram that lines to the eye from the ex- es of such a column produce a per- y parallel representation on the pic- plane, no matter how high the nn. And yet obviously the top of the nn, being at a greater distance from eye, must appear narrower. The ery is at once cleared up when it is rved from the diagram that in the re- entation on the picture plane the upper of the drawing itself is also more dis- from the eye in exactly the same pro- on as in the object, and therefore llel lines will give a true rendering, narrowing of the distant extremities g seen on looking at the parallel lines ıe drawing exactly as in looking at bject itself."

rspective Made Easy by Means of Stereoscopic ams." By C. E. Benham. Published by the r, 28, Wellesley Road, Colchester. Price 6s. 2d. ree). Stereoscope, 3s. 9d. (post free).

Reinforced Concrete in France.

is impossible within the limits of a e review to deal adequately with a of this character, which contains be- n its unassuming paper covers over pages of solid, concise matter without ce of padding or a single photograph dvertisement from start to finish. Its ed object is to provide a clear expla- n of the principles underlying the les of the well-known circular of the ster of Public Works of October 20, which still forms the French official of practice in the design of reinforced rete.

ıe author apparently deals with all ntial principles involved, and he ks difficult problems with a courage h some English writers on the subject t emulate with advantage. The work piously illustrated with simple line ams and working drawings. A sub- ial section of the work goes beyond imits of the Ministerial Circular and with bending moments and shearing ses upon supported and continuous s. A prominent feature consists of ed diagrams of formulæ for facilitat- alculation arranged on loose sheets in arate cover. Tabulated results of the ılations upon which these are based point to the author's appeal, in his st preface, that readers should not ate to advise him of errors. The nce of an alphabetical index, and cially of a glossary of the symbols , is trying to those accustomed to a ent notation.

ıe French method of treating certain lems, notably those relating to Tee ons, is not identical with modern ish methods, and a ready means of paring the two is eminently desirable. For this purpose a translation of at least the theoretical portions of the work under consideration, expressed in English notation, should be of no small value.

PERCY J. WALDRAM.

"Calcul du Béton Armé." By Ch. Aubry, Ingénieur des Ponts et Chaussées. 10 ins. by 6½ ins. 420 pages, 184 illustrations and 15 large diagrams in separate cover. Price 20 francs. Paris: H. Dunot & E. Pinat.

WIND PRESSURE AND CHIMNEY STACKS.

BY E. ALEX. YOUNG, A.R.I.B.A.

It is to be regretted that, owing to the narrow path of the Welsh tornado last October, no recording instrument was affected. Consequently, much valuable data, which would have been available to supplement our knowledge as to the known maxima of wind pressure, was lost. It is probable, however, that some approximation of the velocity attained, in what was quite a phenomenal storm for this country, could be arrived at by an examination of the stacks and walls overturned in its path.

The accompanying sketch, made from a photograph, is remarkable as a dual record of the extraordinary force of the gale and of a piece of excellent building work on what would appear to be but ordinary cottage property!

The two stacks shown have snapped off short at the lower roof, but they rest intact against the upper roof upon which they were thrown. It is difficult to arrive at any approximation of the velocity imparted to the stacks before they were arrested by the eaves above, the well-known rebound of air off a vertical surface such as the back wall giving a retarding action. Even then, and allowing for the apparent crushing in of the gutter and slates, the brickwork and mortar each testify to good workmanship and strong material in both, and especially in the less damaged stack; its fellow was either weaker or received a greater resistance to its impact upon the eaves. This, indeed, is rather borne out by the sketch.

The known facts, which can be assumed from the sketch, allowing for usual practice, are the height, weight, and dimensions of the stack, and some knowledge of the resistance of its mortar; the latter is most important as, short of a laboratory test, it gives an idea of the value of the overturning force which produced rupture. Thus the height to the top of the flaunching, and ignoring the pots, is 10 ft. The plan is a rectangle 2 ft. 7½ in. × 1 ft. 6 in. with two 9 in. × 9 in. flues. The weight is probably 1·5 tons. As regards the adhesion of the mortar, it is apparently fully up to the higher values given in the text books; unfortunately little is known on this subject. It was probably, however, over 20 lbs. per inch. In "Rivington's Notes," the safe value for good hydraulic lime mortar is put at ·06 cwts. or 6·7 lbs. per inch. If a factor of five is assumed, then rupture occurs at about 30 lbs. per inch, but the value must vary considerably with both the bricks and mortar used.

The sketch tells us that it is a case of an inclined beam of uniform section and loading, with a horizontal span of, say, 7 ft., a dead load of nearly 1·5 tons, and a live load due to the gale of at least 20 lbs. per foot of top surface. This was after the shock of the impact, at which moment the stress was no doubt still greater.

Investigating for the maximum intensity of stress (k) due to bending, and ignoring any direct compression, which is probably only a few pounds at most, the value is given by $k = \frac{M}{Z}$ where $M =$ the bending moment and Z the section Modulus.

Then $M = \frac{WL}{8}$ and taking total W at 3,700 lbs.

$$= \frac{3{,}700 \times 7}{8} = 3{,}237 \text{ foot lbs.}$$

$$\text{Also } Z = \frac{1}{\frac{d}{2}} = \frac{bd^3 - b_,d_,^3}{12} \div \frac{d}{2} = {\cdot}9 \text{ feet.}$$

$$\text{and } k = \frac{3{,}237}{{\cdot}9} = 3{,}596 \text{ lbs. per foot super.,}$$

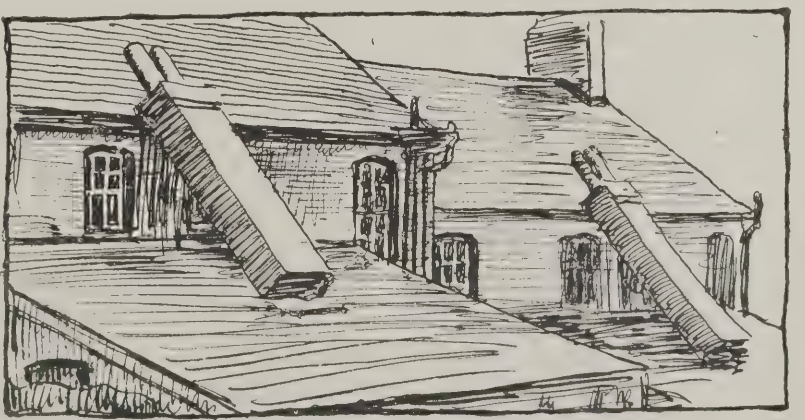
say 25 lbs. per square inch, which, as evidenced by the other stack, is probably close up to the breaking point, and is really only 5 lbs. short of the 30 lbs. assumed from the "Notes" quoted above.

(1) It is now possible to deduce with some approximation the actual wind pressure which produced rupture in the first place. If the stack be first considered as of unmortared brickwork then the pressure per foot super. (p) to overturn it is given by the formula,

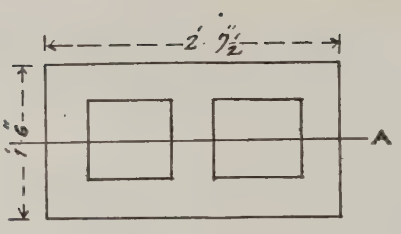
$$p = \frac{Wt}{bh^2} = \frac{(1{\cdot}5 \times 2{,}240) \times 1{\cdot}5}{2{\cdot}62 \times 10^2} = 19 \text{ lbs.}$$

per foot super.

So far we are upon sure ground, but even the wind pressure to which such a stack is ordinarily subjected calls for adhesive resistance on the part of the mortar, and this was, as has been shown, quite equal to 25 lbs. per square in. (= k.)



CHIMNEY STACKS SNAPPED OFF IN THE WELSH TORNADO.



PLAN OF STACK.

(2) Using the formula for stability we have once again $K = \frac{M}{Z}$ where M = overturning moment, and converting to inch terms $Z = 1{,}580$ in., then $M = kZ = 25 \times 1{,}580 = 39{,}500$ inch lbs.

$$\text{but } M = \frac{\text{total pressure (P)} \times h''}{2}$$

$$P = \frac{2 \times 39{,}500}{10 \times 12} = 658 \text{ lbs.}$$

$$\therefore p = \frac{P}{A} = \frac{658}{26{\cdot}5} = 24{\cdot}8 \text{ lbs.}$$

Thus the additional resistance of the stack to overturning and due to the given adhesion of the mortar (k) might be said to be equal to a 25 lbs. wind pressure per square foot, which, added to the 19 lbs. due to overcoming its mass resistance, gives a total of 44 lbs. per foot super, of vertical surface.

The above formula, when modified by an allowance for direct compression, is used in computing the stability only of such structures as the above. It is to be regretted, however, that so little is known of the actual conditions of the whole of the particles of a section at the time of absolute failure; but if we assume the neutral axis to vary, and accommodate its position according to the ratio between the two stresses, we may increase the area in tension. It should be noted in regard to this that the sketch shows the stack capable of standing almost upon its edge alone. It would probably be nearly correct to assume the value of the resistance area of the section as per the accompanying diagram, where the shaded parts show the maximum resistance area available for tension. The neutral axis for a material infinitely strong in compression and failing by tension alone would fall on the outside edge x.y. Even though the axis were assumed an inch or two within this, it would not much reduce the value so obtained.

The value of the resistance area for this figure is, say, 200 in. and the lever arm is near enough to $\frac{t}{3}$ say 14 in.

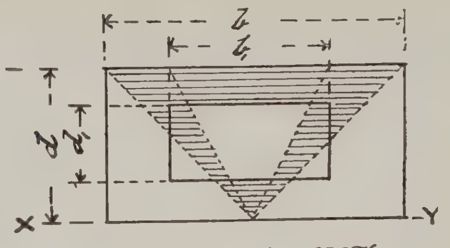
(3) Still assuming k at 25 lbs., we have $MR = 200 \times 25 \times 14 = 70{,}000$ inch lbs., and as this equals the overturning moment, we have also working as before,

$$p = \frac{70{,}000 \times 2}{10 \times 12} = 1{,}166 \text{ lbs. and}$$

$$p = \frac{P}{A} = \frac{1{,}166}{26{\cdot}5} = 44 \text{ lbs. per ft., as}$$

against 24·8 lbs. given by the formula for stability, a considerable jump, but one that certainly seems reasonable. Adding the 19 lbs. as before we have 63 lbs., say 60 lbs. per foot super., as necessary to overcome the resistance of this stack to rupture.

Summarising the foregoing results, it appears that the wind pressure per foot super. (p) comes out as follows, viz.:



EQUIVALENT SEC$^{\text{TN}}$

(1) For overturning the stack on its leeward edge and ignoring the mortar's resistance—19 lbs.

(2) For producing the given maximum of stress (k) of 25 lbs., the stack considered as a cantilever having no self weight, and working within the elastic limits, as for stability (neutral axis at centre)—25lbs.

(3) For producing the value k as the maximum of a resistance area based on the full depth of the stack—44 lbs.

(4) The sum in each case equals 19 + 25 = 44 lbs. and 19 + 44 = say, 60 lbs.

Authorities vary as to the actual ratio of the value p in regard to wind velocity, but by Smeaton's formula where V = velocity in miles per hour we have as follows.

$$V = \sqrt[2]{200p} \;\therefore V \sqrt[2]{200 \times 60}$$
$$= 109 \text{ miles.}$$

Or if the stability value only is used

$$\therefore V \sqrt[2]{200} \times 44 = 94 \text{ miles (nearly).}$$

It would therefore appear that, given the data used as being approximately correct, then the recent tornado in Wales had at one point a velocity of something over 100 miles per hour, and quite probably nearer the above 109 miles than otherwise, especially when taken at a greater height above the ground.

SOCIETIES AND INSTITUTIONS.

SHEFFIELD SOCIETY OF ARCHITECTS AND SURVEYORS.

French Architectural Tour.

"An Architectural Tour in Central France and Burgundy" was the title of an interesting lecture given by Mr. W. S. Purchon before members of the Sheffield Society of Architects and Surveyors at the University last week.

The lecturer described a tour arranged last year as a summer vacation course associated with the Department of Architecture at the University. The places visited were Troyes, Sens, Villeneuve-sur-Yonne, Auxerre, Vézelay, Avallon, Semur, Dijon, Beaune, Tournus, Paray, Autun, Nevers, Bourges, Blois, and Chartres.

Mr. Purchon dealt with a number of important buildings which were studied in the various centres visited. Good examples of Roman work, he said, were seen on the tour, showing how mediæval detail was gradually evolved from it. They saw something of that great struggle with structural difficulties which led to the glories of the thirteenth century, and learned that the mediæval builder was not a mere copyist of earlier work, but endeavoured to solve the special problems put before him.

They were charmed with the playful fancies of the time when the architects turned again for inspiration to Classic examples and were impressed with the beautiful proportion and quiet dignity some of the work of the later Renaissar and from Baroque and Rococo examp they were able to appreciate the value restraint.

The lecturer drew attention to the w tern wing of the Château at Blois (16 40), which he instanced as a triumph the Italian forces, not quite complete haps, for the steep roof was still retain but the exact symmetry of the design the "correct" use of the orders show mediæval ideas had given way before onslaught of the rules and regulations the later Renaissance. He referred this as "part of a great movement, people were getting more formal in th conversation. At the present time an tempt was being made to run a form movement in architecture against the rent, for in all branches of art and in itself we were getting less and formal."

Of the modern work some called for miration, while other specimens drew tention to the necessity for hesitation fore English architects plunged re lessly into the copying of French metho In some of the small towns visited students were particularly struck by retention of the mediæval spirit, and others by the town-planning schemes.

The President (Mr. A. F. Watson) in the chair. A vote of thanks was corded on the proposition of Mr. Hor Wilson, seconded by Mr. C. F. Innoc and supported by Dr. Scurfield Messrs. W. J. Hale and J. R. Wigful

DEVON AND EXETER ARCHITECTURAL SOCIETY.

The annual meeting of this soci which embraces the counties of Devon Cornwall and is in alliance with the Ro Institute of British Architects, was h at the Rougemont Hotel, Exeter, the P sident, Mr. E. Coath Adams, M.S.A., the chair.

A cordial vote of thanks was expres to the President for his excellent addre

Mr. J. Archibald Lucas, A.R.I.B (Exeter), was elected president for ensuing year.

The annual report states that Society's membership has been well ma tained, and after removing the names two by resignation the roll of memb now stands at seventy-seven.

The Council again draw the attention members to the following communicat which was received from the R.I.B. "That it is undesirable for architects exhibit their names on boards or hoa ings in front of buildings in course construction."

LONDON MASTER BUILDERS' ASSOCIATION.

The ordinary meeting of the Council the L.M.B.A. was held on Thursd March 19, at the offices, Koh-i-N House, Kingsway, W.C., the Preside Mr. Walter Lawrence, jun., being in chair. The reports of the special coun and committees were read and adopted

The suggestions of the National Boa of Conciliation with respect to the tra dispute were very carefully consider and it was resolved that, inasmuch as th were somewhat indefinite, the board shou be requested to supply further inform tion in order to ascertain how far-reachi the suggestions are.

The reports made by members of

returning to work upon the present ividual undertaking were most satisfac-. It was resolved that at an early op- tunity the policy of the Council would laid before the members in general ting.

everal new members were elected and her applications for membership were ived.

BLOMFIELD AND THE R.I.B.A.

s we predicted in a recent issue, Mr. inald Blomfield has been asked to ertake the presidency of the R.I.B.A. a third year. At last week's meeting George Hubbard moved the suspen- of By-law 28. This by-law runs as ws: "No president of the Royal Insti- who has filled the office for two suc- ive years shall be again eligible for presidency until the expiration of two s from the termination of his tenure ffice."

he resolution was seconded by Mr. ney Perks and carried with acclama-

Ir. Blomfield, in reply thanked the ting for the implied compliment, and, rring to his recent election as an R.A., that, although he valued the honour erred upon him, he valued even more sympathy and appreciation of his col- ues. The vote was a great encourage- t to him in the duties which he had ischarge from that chair.

e congratulate the R.I.B.A. on its l fortune, and Mr. Blomfield on the al honour implied in this happy it.

A CATALOGUE OF CHITECTURAL PUBLICATIONS.

catalogue of the publications of chnical Journals, Ltd." (the proprie- of this Journal) has just been issued. nsists of forty-four pages, 8 in. wide $\frac{1}{2}$ in. deep, printed on fine art paper bound in stiff cream-coloured covers, front one bearing an attractive title n. The catalogue contains a com- list of the score or more weekly, hly, annual, and other publications d by the firm, descriptive particulars given of each, together with al illustrations.

e works cover a wide range of sub- and appeal not only to architects but e educated section of the general c. The practising architect will find rofessional interests well served by works as "The Practical Exemplar Architecture," "Practical Notes for itectural Draughtsmen," "Standard ils," "A Short Chronological History itish Architecture," "English Eccle- cal Architecture," "Garden City es and Domestic Interior Details," ent English Domestic Architecture," "The Architectural Review," while in cification" he will find a concise comprehensive manual covering the range of building construction.

er publications include "Who's Who rchitecture" (now in course of pre- ion), "The Etchings of Piranesi," an introduction by Professor C. H. y, "Some Famous Buildings and Story," by A. W. Clapham, F.S.A., W. H. Godfrey, and "The Liverpool h Book." A copy of the catalogue e sent post free on receipt of a post- by the Publishers, Technical Jour- Ltd., Caxton House, Westminster.

A NOVEL STAIRCASE.

Visitors to the upper stages of the dome of St. Paul's Cathedral will be familiar with Wren's halved-step staircases from the stone gallery, by which, without unduly awkward going, double the usual rise is attained in a given plan space, treads and risers being assumed equal. An amusing adaptation of this principle has lately come under the writer's notice, the stair in question being domestic and used for space-saving reasons. As will be seen, it occupies a net plan space in the direction of the going considerably less even than a stair composed entirely of winders. There are, however, certain disadvantages which must prevent the use of such an expedient except in dire necessity. Consider the staircase in use: If the user elects to start the ascent with the left foot he must keep to the right; if, on the contrary, he starts with the right foot, he must keep to the left, and in either case never allow his attention to wander. There is a step for each foot, and the effect of getting a foot on the wrong step owing to confusion of purpose will not bear contemplation. The staircase should at least be an incentive to sobriety. It is painful to think of the furniture remover confronted by the necessity of climbing it on hands and knees supporting a heavy wardrobe on his back. Such a stair, also, cannot be effectively carpeted by any ordinary method. E. G.

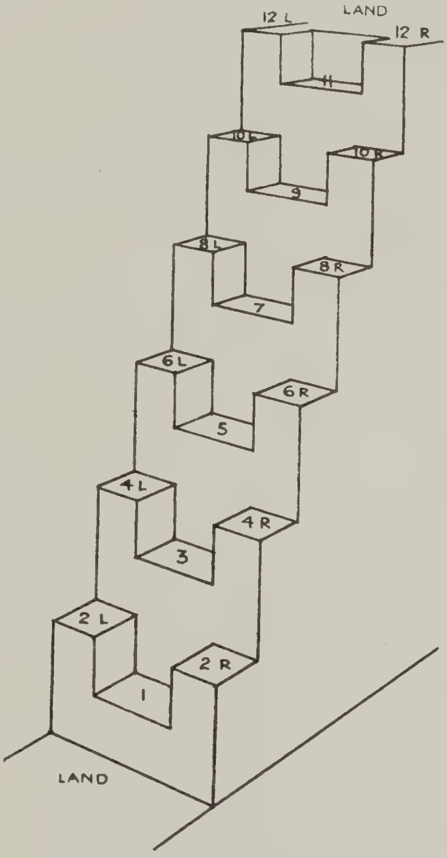


DIAGRAM OF STAIRS.

A Business Announcement.

Messrs. Ernest Morgan and Ralph W. H. Gillett announce that they have acquired all the interest of Mr. E. C. Peirson in the firm of Peirson and Co., with which they have been associated for many years. The business will be carried on under the said name of Peirson and Co., and in all other respects as it has hitherto been conducted.

DEALING WITH FOUNDATION DIFFICULTIES.

Geological conditions often present very considerable difficulties. In the City of Boston, U.S.A., for instance, the ground consists largely of clay, free from grit, but containing a large proportion of quartz flour, with thin layers and streaks of very fine sand and occasional angular fragments of rock, and the methods of dealing with such conditions have been set forth in a paper presented by Mr. J. R. Worcester to the Boston Society of Civil Engineers. In some places there are thick strata of clay and gravel and of hard boulder clay. Some of the material is very soft clay and some of it is silt having a similar appearance. It is nearly impervious to water, is soft and smooth, and very hard when dry. It is compressible and generally underlaid with peat. These conditions make it unsafe for foundations.

Where basement floors have been laid directly on soft ground and the wall foundations have been built on piles the middle of the floor sank in numerous cases from 6 to 12 in. In other cases the floors have been raised by the action of hydrostatic pressure. Mr. Worcester has assumed that in floors supported directly on the surface of the wet ground, only 50 per cent. of the area is exposed to hydrostatic pressure, an assumption that has so far proved adequate for designing purposes.

Numerous foundations have been constructed in open circular wells sheeted with vertical planks bearing against inside steel rings. In other cases holes 3 ft. in diameter have been sheeted with metal forms, removed as the concrete was placed. In some cases where little difficulty was encountered from water efficient and economical results have been obtained by expanding the bottoms of the holes.

The author recommends testing the bearing capacity of soil by means of a load applied to a plunger set in a small, accurately excavated hole in the bottom of a pit dug nearly to foundation elevation.

A summary of recommendations follows:

1. In designing foundations, preliminary borings are of great value to assist in determining: (*a*) At what level, if at all, firm soil may be reached; (*b*) whether piles are likely to be an advantage, and if so, about how long they will probably be; (*c*) in case a hard crust is encountered, its thickness, and the nature of the underlying material.

2. It is of great importance to support all parts of structures on a stratum of soil below the silt and peat.

3. The maximum and minimum levels of the ground water should be determined—the maximum to obtain the hydrostatic head on waterproofed basements and the minimum to determine a safe level for cutting wooden piles.

4. As tentative suggestions for safe bearing pressures on soil the following are proposed: Dry, hard, yellow clay, "boulder clay," dry sand, or gravel, 6 tons per square foot; compact, damp sand, hard sandy clay, hard blue clay, 5 tons per square foot; medium blue clay, whether or not mixed with fine sand, $3\frac{1}{2}$ tons per square foot; soft clay, running sand (confined), $2\frac{1}{2}$ tons per square foot.

5. For the safe supporting power of piles, the formula $P = 3Wh/(p + 1)$, where P = supporting power in pounds; W = weight of hammer in pounds; h = fall of hammer in feet; p = penetration in inches.

SPECIAL LEGAL REPORTS.

Important Light and Air Action against the Prudential Assurance Co.: Expert's New Methods.

Dean v. the Prudential Assurance Co., Ltd.

March 19. Chancery Division. Before Mr. Justice Sargant.

Alfred Ernest Dean, of 65, Leigham Vale, Streatham, sought an injunction to prevent the Prudential Assurance Co., Ltd., Holborn, from continuing the erection of buildings in Dorrington Street to the south and south-east of the plaintiff's premises in Leigh Place, Baldwin's Gardens, to the rear of the Prudential Company's block of buildings, so as to interfere with his ancient lights.

For the plaintiff, Mr. Mark Romer, K.C., and Mr. Rowlands appeared, and for the defendants Mr. Martelli, K.C., and Mr. Sayer.

Mr. Romer explained that the buildings complained of might eventually be used as offices. There was here no question of damages. It was essential that the plaintiff, who was a manufacturer of X-ray apparatus and electro-medical apparatus for hospitals, should have his light. In one room very fine wire to the length of about twenty-five miles was wound on spools for purposes of electric current, and it was important that the plaintiff should have all the light that he now enjoyed. It was only after great trouble—when the call for X-ray apparatus began—that he found premises suitable for his purpose. His factory was behind the enormous buildings of the Prudential Company.

The Judge: Are the new buildings in connection with the National Insurance Act?

Mr. Romer: No, those are to the left.

The defence entered was that since the defendants had amended their plans—though they held that the original building would not have diminished plaintiff's light—whatever the plaintiff suffered was trivial and could be compensated for by damages.

Mr. Dean, in the witness box, observed that among his special appliances was one for taking radiographs of children's mouths. His premises were in the neighhourhood of the famous Brook's market, and he spent two years in a search for a factory that would conveniently fit in with his special requirements. The lights affected were many—three skylights in a lean-to roof on the ground floor, four windows each on first and second floor on the south side, and twenty windows on the east side overlooking Leigh Place.

Mr. Howard Chatfeild Clarke, F.R.I.B.A., and a past president of the Surveyors' Institute, was called to give technical evidence.

His lordship said there was no need to introduce Mr. Clarke to that Court.

Mr. Martelli: That is one thing that I am not disputing—that Mr. Clark is an eminent authority on all these matters. We are agreed about that.

Mr. Clarke said the defendants were making a point of the angle of light that remained, but the more he saw of these cases the more he was convinced that the nearness of a building was more important than the angle. The setting back of a building a very little would yield a great amount of diffused light. While he was making a test with a screen intended to give the equivalent shadow of the new building, he thought some blinding accident had occurred, but it was only that the wind had caught the edge of the screen and let a flood of daylight in.

Mr. Martelli: Would you say the plaintiff's premises were in a poor locality?

Mr. Clarke: No; I should say they are the good old type of factory. You must not compare them with the swell place of the Prudential near by.

Mr. Hebnor Bloss Taylor, of the firm of Browett and Taylor, surveyors and valuers, 9, Warwick Court, Holborn, and Mr. Thomas Alfred Cordery, of the same firm, gave evidence for the plaintiff. The latter observed that he made an examination in the rain with his umbrella down, to avoid the shadow of the umbrella.

Mr. Bloss Taylor said that when he tried to read his diary in one of the rooms he found it difficult. The shadow was not cast, he thought, by St. Ursula's Home, and he had not picked the darkest corner in the whole factory in which to make his test.

Mr. Martelli announced that his experts had made a special test that morning and he should have to call witnesses specially with regard to that.

Mr. Joseph John Fasola, A.M.I.E.E., A.C.G.I., engineer, of 30, College Street, Dowgate Hill, E.C., said he had just completed an examination of the plaintiff's premises to ascertain whether a suggestion of the defendants, was practicable, that certain machinery should be moved to a higher floor. He found it was quite out of the question. The machinery could not be taken from the first to the second floor, because there was insufficient headroom there to arrange the transmission shafting. Moreover, the weight would be too great for the floor.

Mr. Martelli: You could heighten the roof.

Mr. Fasola: I should not think of it as a commercial proposition.

Mr. Robson, an instrument maker, said there would be thirty workmen employed at the plaintiff's works. A considerable amount of light was necessary. He was sometimes employed upon coagulators—small instruments for testing the blood—and had to use the microscope. The witness passed to counsel a brass-bound slide in a velvet case, showing the weblike netting which in congealed blood holds, as in a reticule, the red corpuscles.

Mr. Chatfeild Clarke, recalled, said he was present at a test made at nine o'clock that morning by the defendants. He found it so dark 8 or 9 ft. in from a ground-floor window, with the screen up, that he could not read ordinary print. It had been raining. When the screen was lowered the effect was material, even on the second floor. The light was infinitely stronger. By the contemplated wall plaintiff's ordinary use and enjoyment would be seriously curtailed, leaving out of account altogether any question of the extra fine work he had to do.

Mr. Bloss Taylor and Mr. Cordery, recalled, gave similar evidence of the morning test and the statements of workmen who had to use the electric light during the test, and this concluded the plaintiff's case.

Mr. Martelli, opening the defendants' case, said his point was, not what was taken, but how much light was left and was it enough for use according to the ordinary requirements of a factory in this neighbourhood? Mr. Justice Farwell, in Higgins v. Betts, said it was necessary to guard against having the attention of the Court unduly directed to the light taken; it had to consider only the light that v left. Upon that point Mr. Martelli c tended that the plaintiff was entitled o to the amount of light necessary to ordinary business, and was not entitled relief on the ground that an extraordin user had been interfered with.

The hearing was adjourned.

On the resumption his Lordship, giving judgment in favour of the plaint said he had that morning (Monday we visited the premises, and while the wa house was not well lighted he found screen made a great difference to higher windows. The rights of the pla tiff were, in his judgment, undoubted, a his remedy was not by way of damag Here was the best reason for granting injunction. When a plaintiff had h property as an investment with a view sale, and had claimed, it had been h that damages did as well as an inju tion. But here the defendants w building for an investment, and plaintiff desired to carry on his busine He saw no reason for turning him out a factory where he had been carrying successfully, and he should grant him injunction prayed for. He thought defendants should make some subst tial alteration in their building, not in nature of a mere splaying off similar that which had been already conte plated. Defendants were ordered to the costs of the action.

What is a New Building?

Leonard v. Hoare and Co. and Anoth

March 23. King's Bench Divisional Court. Be Justices Bray, Avory and Rowlatt.

This was an appeal from a decision the Bromley magistrates dismissing a su mons taken out at the instance of Foot's Cray Urban District Council agai Messrs. Hoare and Co., of the Red L Brewery, London, and Mr. T. Knight, Craybrooke Works, Sidcup, for alle contravention of the by-laws of Council.

Mr. Danckwerts, K.C., and Mr. Jee appeared for the appellants, and G. M. Freeman, K.C., and Mr. Poyser the respondents.

Mr. Danckwerts stated that the p was whether certain works that had b done to the Seven Stars Inn constitute new building. If it did then he was rig if not, the other side were right. The spondents were summoned for, as alleg erecting a new building within the me ing of Section 23, Sub-section a of Public Health Amendment Act, 1907, w out delivering to the clerk or surveyor the Foot's Cray Urban District Cou plans of such building, contrary to law 13.

The facts appear fully from the ju ment of the Court.

Mr. Justice Bray said the question really a small one, owing to the resp dents' admission that if the portion in pute of the building should be treated part of a new building, then the by- had not been complied with. What Court had to consider therefore whether they were to look at the whole this building or only at the part. building was one building before th works were carried out, and it was building now, and the question whether by virtue of these operation was a new building. His lordship refer to the by-law in question: "The re-e partial, of any building shall be ed to be the erection of a new build- and said that in this case there had an outer wall of the old building d down and a partial re-erection of building, therefore, in his opinion, it within the by-law and the appellants entitled to succeed.

Justice Avory, who agreed, thought ince any part of the building was re- d it meant that the whole building d be regarded as a new one. If it new building, then the by-laws re- that complete plans and sections ry intended new building should be red for approval. His lordship that those by-laws were sanctioned the Act of 1907, and it might be hey and similar ones required con- tion and amendment in view of the ions of the Act.

Justice Rowlatt concurred.

appeal was accordingly allowed, costs, and the case remitted to the s to convict.

COMPETITIONS.

Constitutional Club, Grimsby.

Committee of the new Constitu- Club, Grimsby, invite architects to n designs for the erection of a new n accordance with the following con- :

ost.—It is desired that the whole , including the removal of the pro- at present on the site, and the erec- the new building, be completed for not to exceed £3,500. Architects ting designs must guarantee that cheme can be carried out, exclusive furniture, electric lighting, interior ions, and architects' charges. If, aining tenders, it is found that the tender is more than the estimate, the ittee reserves the right to cancel the ement with the architect, and to re- from him any amount off the pre- he has already received. (This, r, will not be enforced if the tender in 10 per centum of the estimate.)

rchitectural Style.—The Committee t decided upon any particular style of architecture, but would prefer the building to be faced with Accringtons or buff-faced bricks, terra-cotta, or stone.

3. Scheme.—A preliminary scheme has been prepared, but competitors are not bound to it in any way, and may revise it in any manner they desire.

4. Plans.—Plans are to be on a scale of not less than 1 in. to 8 ft., and to include: (*a*) Plan of each main floor and any mezzanine floors and basement. (*b*) Elevation to Victoria Street and Upper Spring Street (*c*) Sections. The three premiated designs shall become and remain the property of the Club Committee.

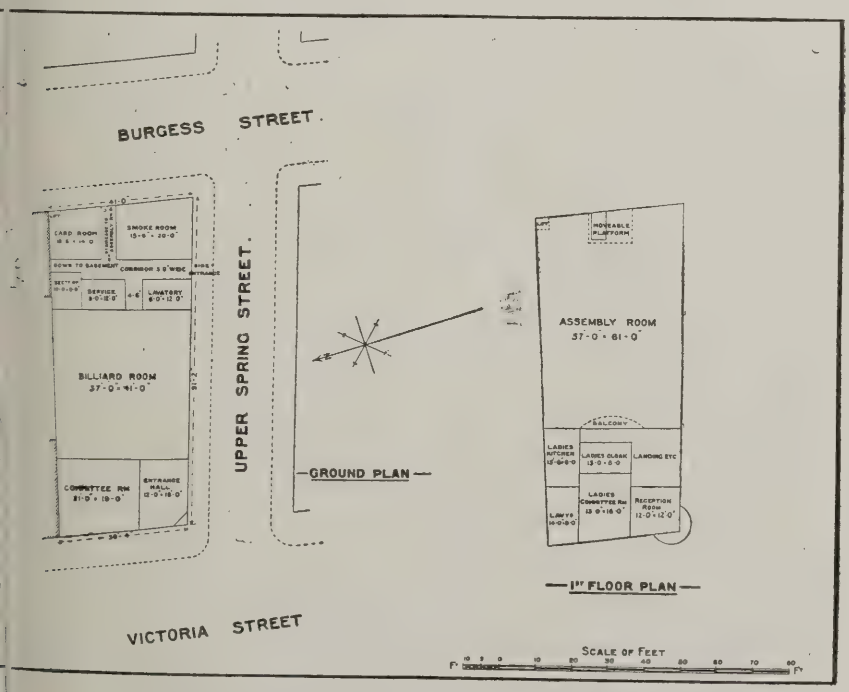
5. Premiums.—The Committee offer premiums of £40, £20, and £10 respectively, to the three competitors whose designs comply with the conditions, and are chosen by the Committee as being most suitable, the premium of the plan selected for erection merging into the architect's commission.

6. The attention of competitors is drawn to the following particulars: (*a*) Drains can be tapped from three sides of the building. (*b*) Basement at the rear of the site must provide for cooking kitchen, coal-house, heating apparatus, and store. (*c*) The billiard and assembly rooms will be heated by low-pressure hot-water pipes, the rest of the rooms by fires, but in the billiard-room open fireplaces must be provided for in addition. (*d*) It is suggested that the ground floor should be two steps up from the street level. (*e*) The floors must be of fireproof construction, and the partitions of Mack or similar construction. (*f*) It is desirable that the competitors should give some suggestion for interior decoration. (*g*) It is proposed that a miniature rifle range shall be provided for in the false roof, the range to be between the queen posts, to run practically the whole length of the building, and to be provided for in the total cost. (*h*) Store-room accommodation must be provided in the false roof over the small rooms facing Victoria Street. (*i*) Lavatory and plumbing work throughout must be of the very best quality, workmanship, and material. (*j*) It is proposed that the rooms be 14 ft. high on the ground floor, and 15 ft. on the first floor, with the exception of the small rooms on the first floor in Victoria Street; those above to be 11 ft. (*k*) The Model By-Laws of the L.G.B. (1877) are in force, without alteration.

7. Deposit for particulars.—On receipt of a stamped addressed foolscap envelope, a copy of these conditions will be supplied to any architect. On receipt of deposit of £2 the Committee will supply to each intending competitor a copy of these conditions and a sketch plan of the suggested accommodation. If, on the receipt of the particulars, the architect finds that he cannot compete, the deposit will be returned if the whole of the papers are sent back within ten days from their receipt by the architect. If not so returned, it will be assumed that the architect intends to compete, and the deposit will be returned on receipt of a bona-fide scheme.

Designs are to be sent in on or before Tuesday, June 2 (at noon), addressed, carriage paid, to Mr. H. W. V. Sheckell, Secretary of the Constitutional Club Committee, Victoria Street, Great Grimsby.

Members of the Society of Architects are requested not to take part in the above competition without first ascertaining from the secretary whether the conditions are such as can be approved by the Society.



GRIMSBY CONSTITUTIONAL CLUB: SITE PLAN.

Housing Scheme, Motherwell.

The award in the above competition has been secured by Mr. A. Victor Wilson, of Motherwell, whose scheme is estimated to cost £13,000.

Barnsley Town Hall.

Members and Licentiates of the R.I.B.A. are again warned that they must not take part in the above competition, the conditions not being in accordance with the Institute's published regulations for architectural competitions.

City and County Building, Wilmington, Delaware.

Messrs. Palmer, Hornbostel, and Jones have been awarded the first premium in the competition for a new joint city and county building to be erected at Wilmington, Delaware. The cost is estimated at $1,000,000.

Mill Hill County School.

Members of the Society of Architects who have been invited by the Hendon Education Committee to take part in the above competition are requested not to do so without first ascertaining from the secretary whether the conditions are such as can be approved by the Society.

King's Cross Station Improvement.

Readers are reminded that designs in our competition for the improvement of the front and forecourt of King's Cross Railway Station (full particulars of which were given in the JOURNAL for March 11) have to be sent in by Wednesday, April 8. Prizes of £5, £3, and £2 will be awarded. Mr. A. E. Richardson, F.R.I.B.A., is the assessor.

BUILDERS' FOREMEN AND CLERKS OF WORKS ANNUAL CONCERT.

The annual concert of the Association of Builders' Foremen and Clerks of Works was held on Saturday evening last in the Holborn Viaduct Hotel. Mr. Moritz Kahn (of the Trussed Concrete Steel Company), who occupied the chair, having briefly described the objects of the association, congratulated the members on the very satisfactory progress being made—mentioning that the fund for philanthropic purposes had grown from £290 in 1903 to over £2,000 in 1913, and that a pension fund had been established on a most satisfactory basis.

PROJECTED NEW WORKS.

Asylum Alterations, Denbigh.

Alterations and improvements are to be made to the quadrangle block at Denbigh Asylum, at a cost of £7,300.

Houses, Cannock.

Upon the recommendation of Cannock U.D.C., it has been decided to build fifty houses at a cost of £175 or £200.

Middlesex County Asylum.

Middlesex County Council propose to purchase for £33,000 the Rectory Farm and part of Vicarage Farm, Heston, as a site for the new County Asylum.

Open-Air School, Brighton.

Brighton Town Council have adopted plans of a new open-air school, to be erected in Loder Road at an estimated cost of £19,250.

Business Premises, Torquay.

Torquay Corporation have passed plans for a fine block of business premises from the designs of Mr. F. G. Moore, B.Sc., M.Inst.M.E., of Torquay.

Asylum, Devizes.

Messrs. W. E. Chivers and Sons, builders, of Devizes, have secured the contract for building the new blocks at the Wilts County Asylum. The contract price is between £27,000 and £28,000.

Beaconsfield Memorial, Aylesbury.

A statue of the Earl of Beaconsfield is to be erected in Aylesbury as a Bucks memorial to that statesman, who represented the county in Parliament from 1847 to 1876.

Memorial Hall, Lewisham.

It is proposed to build in Lewisham a "Bristow Memorial" Hall, to commemorate the long connection with St. Stephen's Church, Lewisham, and the district, of the late Canon Rhodes Bristow.

Buildings, Cambridge.

Mr. Sidney French, of Cambridge, has been appointed architect for the Children's Home at the Cambridge Union, also for a new detached building for the accommodation of nurses at the Cambridge Union.

Rebuilding, Birmingham.

The old "Midland Counties Herald" building in Union Street, Birmingham, erected in 1838, and enlarged some twenty-five years ago, is to be demolished and rebuilt as a shop with modern offices at a cost of about £2,460.

School, Wandsworth.

A school to accommodate 996 children is to be erected in Derington Road, Wandsworth, at a cost of £24,099. The tender of J. and C. Bowyer, Ltd., Norwood, for the work has been accepted by the Education Committee of the L.C.C.

Church Extensions, Manchester.

The following building works are contemplated in connection with the Church in the Manchester district. Scheme to purchase a rectory for the parish of St. Andrew's, Levenshulme, at a cost of £1,600; new parsonage for the parish of Littleborough, near Rochdale; the aggregate cost will be about £3,100; church and parish room, St. John's, Coppull.

Fire Station, Darnley.

The District Committee of Upper Renfrewshire are about to begin the erection of a new fire station at Darnley. The plans have been passed, and the County Council have given their approval to the site, which is on the Nits Hill Road, opposite Darnley Hospital. The station, which will provide accommodation for two motor engines, is estimated to cost £5,000.

Improvements at Brighton.

Brighton Town Council has approved plans for the construction of a covered band stand and concert hall on the West Pier, while the Palace Pier is to be considerably widened and provided with a new covered band-stand to accommodate 4,000 persons, in addition to an outdoor restaurant at the pier-head, in place of the miniature circus, which has been removed. The two schemes will involve an expenditure of something like £40,000.

Port of London Housing Scheme.

With the huge extension of the Port of London Docks an increase in the housing accommodation of the workers has become an urgent necessity, and plans have now been sanctioned for the erection of 164 houses on part of the Prince Regent Lane Estate, which, being in both West Ham and East Ham, is within easy reach of the docks. In addition to building houses for new workers the Port of London Authority has to provide houses for the families displaced by the dock extension, and these dwellings are to be completed by the middle of next November.

Seaplane Buildings, Sheerness.

The Admiralty have sanctioned an expenditure of £12,650 for the completion of the buildings in the port of Sheerness for the accommodation of seaplanes. The seaplane station is on the Grain side of Sheerness Harbour. The total cost of the work will be £26,800. The Admiralty also propose to expend during the ensuing financial year the sum of £51,560 in providing accommodation for seaplanes at the naval air station on the East Coast and in the Channel, and also £9,444 for the accommodation of airships. The total cost of the airship halls and stations now in course of erection is estimated at £284,500.

Town-Planning Schemes.

The L.G.B. have given authority for the preparation of three further town-planning schemes under the Housing and Town-Planning Act, 1909. The schemes are authorised to be prepared by the T.C. of Wallasey and the R.D.C. of Doncaster and Honiton. In the case of Wallasey the scheme is to apply to a small area within the borough. In the case of Doncaster the scheme is to relate to an area of about 5,708 acres situate in the parishes of Askern, Sutton, Campsall, Norton, Burghwallis, Owaton, Moss, and Fenwick. In the case of Honiton the scheme is to apply to an area of about 325 acres situate in the parishes of Salcombe Regis and Sidbury.

London.

Subject to compliance with certain conditions, consent has been given by the L.C.C. to the execution of the following works:

Bethnal Green, South-West.—Addition to St. Andrew's Church, Viaduct Street, Bethnal Green, on the application of Mr. A. Durst, on behalf of the vicar and churchwardens.

Brixton.—One-storey addition at the rear of 194, Brixton Road, Brixton, on the application of Messrs. Hulbert and Haysman, on behalf of Dr. Grant.

Chelsea.—Balcony at 1, St. Leonard's Terrace, Chelsea, on the application of Messrs. Adams and Watts.

Motor garage at the rear of 77, Cadogan Place, Chelsea, on the application of Mr. R. C. Fry.

Clapham.—Alterations at 6, Old To
Clapham, on the application of Mes
Searle and Searle, on behalf of Mr. A.
Leman.

Hammersmith.—Garage building on
site of Bradmore House, Queen Str
Hammersmith, on the application of S.
Francis and Co., Ltd.

Holborn. — Uniting Regent Ho
Kingsway, with Calton Studios, G
Queen Street, Holborn, by means of
opening at the second floor level, on
application of Messrs. Trehearne
Norman, on behalf of Powers Estates,

Uniting 3, 4, and 6 to 7, Fulwo
Rents, Holborn, on the application of
E. Greenop.

Kensington, North.—Conversion of
South Row, Kensington, from a dom
building to a warehouse building, on
application of Messrs. Davis and Son.

Kensington, South.—Building on a
on the southern side of Campden
Kensington, on the application of Me
Gale, Gotch, and Leighton, on beha
Mr. L. Meinertzhagen.

Lewisham.—Stable and coach hou
15, West Hill, Sydenham, on the app
tion of Mr. C. Jones, on behalf of Mr.
Leach.

Paddington, North.—One-storey sho
space at the rear of 237, Elgin Av
Maida Vale, next to Portsdown Roa
the application of Mr. W. Petch, on b
of Mr. J. King.

St. George, Hanover Square.—Iron
glass shelter at the grill room entran
the Berkeley Hotel, Berkeley S
Hanover Square, on the application o
R. Griggs and the Bromsgrove Guil
behalf of the Berkeley Hotel Com
Ltd.

Bath-room addition at the rear of 4,
Halkin Street, Belgrave Square, on th
plication of Messrs. Morris and Co.,
half of the London and Provincial
Company, Ltd.

Southwark, West.—Uniting 44 an
Southwark Street, Southwark, by
of an opening at the second floor lev
the application of Mr. A. L. Champ
on behalf of Wright, Layman, and U
Ltd.

Strand.—Projecting illuminated si
front of 4, Buckingham Street, Stran
the application of Mr. P. S. Braund.

Projecting sign and clock at 15a,
Bond Street, on the application of W
and Gillow, Ltd., on behalf of Pera
ette Company.

Waring and Gillow, Ltd.; Repor Accounts.

The report and accounts of M
Waring and Gillow, Ltd., for the
from September 1, 1912, to Janua
1914, have been submitted by the di
of the company. It is shown that the
on trading account, including divider
ceived on investment and transfer fe
after allowing for depreciation, ba
doubtful debts, and the whole of t
vertising expenditure incurred sin
formation of the present company
tember 1, 1912) amounts to £
13s. 3d., a balance of £15,150 2s. bei
after charging directors' and auditor
and trustees' remuneration, and t
terest on the debentures. The di
recommend that from this sum the
of the preliminary expenses incur
forming the present company, amo
to £10,936 11s. 2d., be written off,
a balance to be carried forwa
£4,213 10s. 10d.

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ELECTRICAL NOTES.

New Ceiling Roses.

The "Condulet" is a new pattern of ceiling rose, introduced by Messrs. Simplex Conduits, Ltd., and comprises a porcelain fitting of special design with large terminals of peculiar shape and a metal cover for the conduit box. The porcelain is fixed rigidly in its position, so that there is no danger of the terminals coming in contact with the side of the conduit box and causing an earth or a short circuit. The brass terminals are made from hexagonal bar, and are slotted in the centre, part of the slot being tapped for a grub screw. This form of terminal makes it unnecessary to cut the conductor if the ceiling rose does not happen to be at the end of a run. The insulation is merely removed for about half an inch, and the bare wire laid in the slot, where it forms a good contact, and is secured by the grub screw. The terminals are of such a size that a cheese-head screw can be tapped into one of the sides for the purpose of securing the flexible conductor by means of a small washer. One of the advantages of this design of ceiling rose, the porcelain being attached to the cover, is that the flexible wire can be attached to the terminals without having to mount a ladder for the purpose. The whole fitting with the cover is then taken up to the box, the conductors slipped in, and the cover screwed on.

A special form of grip is provided in the porcelain to relieve the terminals of all strain from the fitting. There is a small hole in the centre of the porcelain, with a rubber ring on top, and the direct downward pull of the fitting compresses this ring and assists in gripping the flexible effectively. It is also claimed that the rubber ring acts as an anti-vibrator and thus prolongs the life of metal filament lamps. The standard cover is of black enamelled iron, with a china nipple; but it can be provided in any finish to match the style of fitting employed, which is of importance where appearances are a consideration. This cover and porcelain are supplied with the standard type of circular box, 2⅜ in. by 1⅛ in. deep, from which it will be seen that it has the further advantage of low projection.

One of the objections to switch lampholders, key-holders, or key-sockets, as they are variously called, is that the operation of the switch, which usually has to be effected with one hand, gives the lamp a very bad jerk and also sets the pendant swinging. This must obviously tend to shorten the life of metal filament lamps. A device has been introduced by the General Accessories Co., Ltd., of 70, Worship Street, E.C., which is a combination ceiling rose with a switch attached by a chain alongside the flexible wire. One object, of course, is that this fitting, or accessory, shall supersede the switch lampholder. The switch contains a ratchet device, and is put on or off by alternate pulls on the chain, and it is clear that these operations need not disturb the lamp or flexible. The terminals of this accessory are of the large loop in type, and are separated by a bridge with holes for the flexible cord. The insulation is of heavily glazed marmorite, and the switch contacts are of silver, from which it is obvious that good material is provided and that the arrangement is of well-designed and solid construction.

A B.T.H. Switch Plug.

It is, of course, customary with
wiring work to fit a switch alongside
the same base as a wall plug, particu
for heating or power circuits where
currents are taken. In some instance
fitting is a combination one. But,
then, the object in view is defeated
is possible for the consumer to leav
switch on and then to insert the plu
to withdraw the plug without switc
off. In order to make both these action
possible, an ingenious interlocking s
plug has been placed on the marke
the British Thomson-Houston Co.,
which is quite simple and does not in
any mechanism. The switch, which
the tumbler pattern, is in the upper
of an oval china base, the lower part
occupied by the plug socket, into
the two-pin plug fits in the usual ma
The off position of the switch is whe
lever is upwards. The principle o
interlocking is really that the plug
the switch lever are so close togethe
they get in each other's way. The
is provided with a fibre flange or g
which, when the plug is inserted i
socket, rests on the cover of the l
The plug cannot be inserted when
switch is on—that is when the lever
the downward position, because the
is in the way of the flange. The s
has therefore to be turned off, and
the plug is inserted in the socket the
can be moved to the downward or on
tion because it now clears the f
When the plug is removed the switch
is pushed off by the flange of the plu
that the circuit is broken and the s
does not remain alive. The device is
for five ampères, but a larger size is
introduced shortly—also a flush patte

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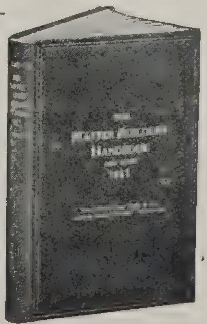

PRE-EMINENT

The history of electric lamp making—the progress, the striking inventions, the surmounting of almost insuperable difficulties—is a veritable romance of science. Mazda has always been closely identified with this progress; nay, more—Mazda is responsible for the greatest advances and the most far-reaching improvements of recent years. The Mazda Drawn Wire Electric Lamps sold to-day are the embodiment of the world's greatest scientific skill and the largest lamp manufacturing experience, and Mazda is reaping its inevitable reward—it is the most extensively used metal filament lamp in the world.

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WARING & GILLOW, Limited.

THE PROGRESS OF THE NEW COMPANY.

LOSS OF £50,000 TURNED INTO A PROFIT OF £51,000.

The First Annual General Meeting of Waring and Gillow, Limited, was held on Monday at the premises of the Company in Oxford Street, London, W.

Mr. Kennedy Jones, the Chairman, presided.

The Secretary (Mr. Joseph Ritson), having read the notice calling the Meeting and the Report of the Auditors,

Mr. Kennedy Jones said: "I do not propose to weary you with a prolonged examination in detail of the figures of the Balance Sheet which you have before you. Personally, I suspect a Balance Sheet which requires an elaborate explanation from the Chairman. In my view the Accounts presented to Shareholders ought to be capable of easy and quick understanding, and so far as your Directors are concerned, they, together with the Auditors, laboured to get the figures of your very large and exceedingly complex business into a simple yet comprehensive form, which would enable you to grasp at once the position in which the Company stands. The Balance Sheet before you covers, as you are aware, a period of seventeen months, a time almost wholly devoted to the reconstruction and reorganisation of the business in all its branches, yet we have emerged with a net trading profit of £51,000, which represents a progress that will be best understood when I tell you that the loss made during the last seventeen months of the Receivership is reckoned to have totalled to about the same figure. So that we can claim in our first period to have transformed a £50,000 loss into a profit of £51,000. That, I trust you will agree, is not unsatisfactory. After paying the Debenture Interest and Directors' and Auditors' and Trustees' fees, we are left with £15,000, which we propose to utilise in writing off the whole of the preliminary expenses incurred in the formation of this Company, and to carry forward the sum of £4,000. Having regard to the fact that for most of the seventeen months with which we are dealing your Board were occupied in dealing with the wreckage of the old Company, we are tempted to regard the result as being at least of good omen for the future of your business. There are two or three sets of figures in the Balance Sheet to which I think I might draw your attention, and which, perhaps, are not without significance as to your future.

The first is that you as a Company owed on the 31st January a matter of some £97,000, and that on the same date you had in cash and in book debts owing to you a sum of £398,000. I have heard it suggested that the amount of book debts seemed large, but if you keep in mind the fact that the turnover of your business in the last twelve months amounted to over one million pounds, indeed to close upon eleven hundred thousand pounds, the book debts will be found to represent not more than three months' trading, and that, in a business where by reason of the many and considerable contracts you have, where long credit is taken by our clients, is not a term to which any reasonable objection can be taken.

The other live assets of your business and stock-in-trade, which total about £65,000, have been taken into your balance-sheet on the most conservative basis. Absolutely new stock has been taken in at cost, and in the case of stock which has been in the showrooms for any period of time with considerable depreciation, while the freehold and leasehold premises, plant, and machinery, stocks of time and material have all been set down by outside valuers at figures well within their value. I think it is of importance to recognise that the live assets of your business in value cover almost two-thirds of the whole capital of your company.

The goodwill figure on the balance-sheet is, of course, a purely arbitrary one. It is accounted for by the fact that we have among our liabilities taken in the shares which we issued fully paid at their face value and not at their nominal value at which they were accepted by the holders. No one who took Preference Shares in lieu of the old debt imagined that the Preference Shares were worth anything like their face value, and those to whom the Ordinary Shares were given as a bonus received them as pieces of paper which might in the long—and I hope not too distant—future be of some value, but which certainly had no value seventeen months ago and no particular value even to-day.

There is just one point in connection with the Preference Shares which has given rise to some misconception in the financial columns of some newspapers. The Preference shares only became cumulative as to dividend on the 1st January of this year. You will remember when the scheme of the reconstruction was before the courts we who represented the new Debenture-holders fought hard with the Committee of the old Debenture-holders to make the dividend on the new Preference shares cumulative as from the beginning of 1915. We felt then, as indeed we feel now, that it will take every bit of three years or so to improve the position of this Company so as to enable it to reach that stage of profit at which it will be capable to meet in full the liability of the Preference shares, but Mr. Jennings, who represented the old Debenture-holders, was equally as strong that the period during which the shares should be non-cumulative should only extend over twelve months, and ultimately we compromised on the period of sixteen months, and so fixed on the 1st of January of this year as the date from which the Preference shares had a right to claim the dividends of the Company.

Consequently we began our new financial year on the 1st February with a debt merely of one month's Preference dividend against us—a debt which is covered by the amount we have carried forward. I have every hope for the future of this Company, but I have no expectation that the progress during the next twelve months, considerable as I expect it to be, will be great enough to enable the Directors to meet the whole of the Preference dividend in twelve months' time. That opinion is also the opinion of your Board, and though our prophecy may be falsified by results, yet I deem it only right at this Meeting to warn you against indulging in the hope that we shall be able in twelve months' time to pay out of the Profits a matter of some seventy or eighty thousand pounds. Even if our success is greater than we anticipate it will be, it will be much the wiser course for this Company to build up large liquid cash reserves, which can be made remunerative by reinvestment in the growing business of your company. That, however, is a
matter which we shall all be better a
deal with twelve months hence.

Well, gentlemen, your Board so fa
satisfied with the progress which has
made. They are satisfied with the
and the accounts they have been ab
present to you at the end of this their
period of management. They believe
the present year will enable them to
further and, perhaps, considerable prog
Every branch of your business, with
small exception in Canada, shows a
—a profit which in every case we
reasonable hopes of improving this ye

The whole of your business has bee
organised from top to bottom. We ha
most re-built your factory at Hammers
We are rebuilding your factory at Lanc
and we intend when we are through
the factory at Lancaster to take in han
complete re-organisation of your facto
Liverpool. The fact that we have
profits, however small, in every det
your business with the one slight exce
I have spoken of, shows that we
chopped out almost all of the dead
which we found in the concern as it ca
us, and we naturally expect that we
reap greater benefit in the coming
from all the alterations we have made
we are conscious that it may still be
work getting to that pinnacle of pros
which we hope ultimately to achieve

In addition to perfecting our bus
methods, in addition to perfecting
workmanship, our methods of han
contracts whether large or small,
efficiency and economy, we have to r
and this is always a slow process—th
fidence of the public in all that Warin
Gillow does—a confidence which was
shattered by the mistakes of the old
pany. I think I may say withou
aggeration that we are renowned thr
out the world for our taste and our c
manship. We are now seeking,
hope that we will achieve, an equal re
for our efficiency and our economy.
our desire to have your firm know
only as the most perfect furnishing
in Europe, but one to which people
kind and degree can come on the con
knowledge that they are not only goi
obtain the best material and the best
manship, but the best value for mo
England.

Personally, may I say that I a
tremely satisfied not only with the pr
we have made, but with the help w
have received from all my colleagu
the Directorate and from every wor
every branch and detail of your vast
ness. Without exception, they
laboured unceasingly during the
seventeen months to help in the w
reconstructing and reorganising the
ness and placing it in the position w
holds to-day. I am grateful to them.
myself I have the personal satisfact
being, as Chairman of your Compa
the head of operations which I feel
are going to result in the permane
the prosperous continuance of a bu
which, established so long ago as 169
influenced the taste and comfort of
not merely in this country, but has
the English feeling into practical
parts of the civilised world.

I beg to move that the report a
counts as presented to you be approv
adopted.

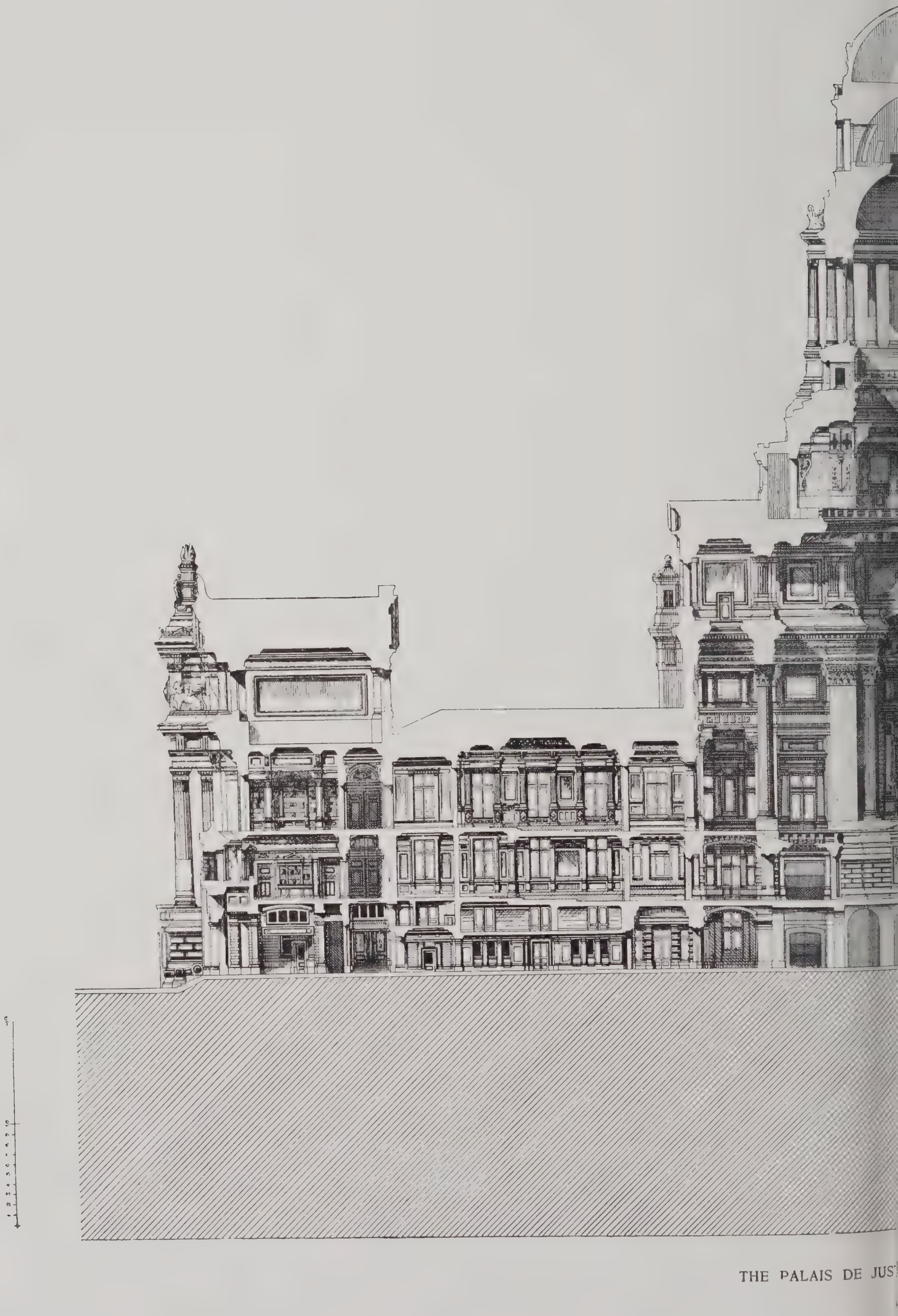
Mr. Japhet seconded the motion
was carried unanimously.

Messrs. Saemy Japhet, William J
nings, and Henry W. Weaving we
elected directors of the Company.

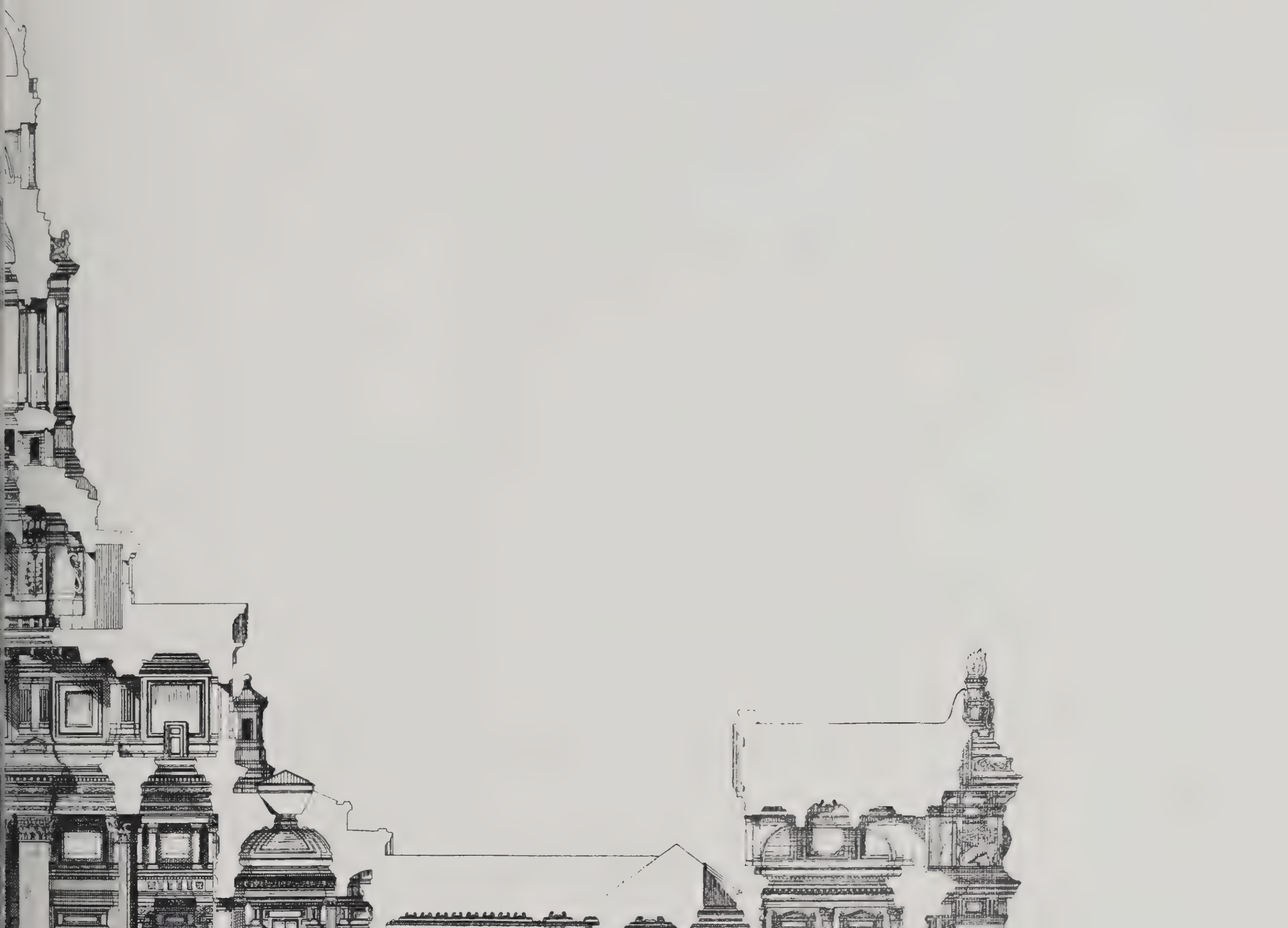
It was proposed and carried unani
that the election of Auditors be left
hands of the Board.

The proceedings terminated with
of thanks to the Chairman.

lement to "The Architects' and Builders' Journal," Wednesday, April 1, 1914.

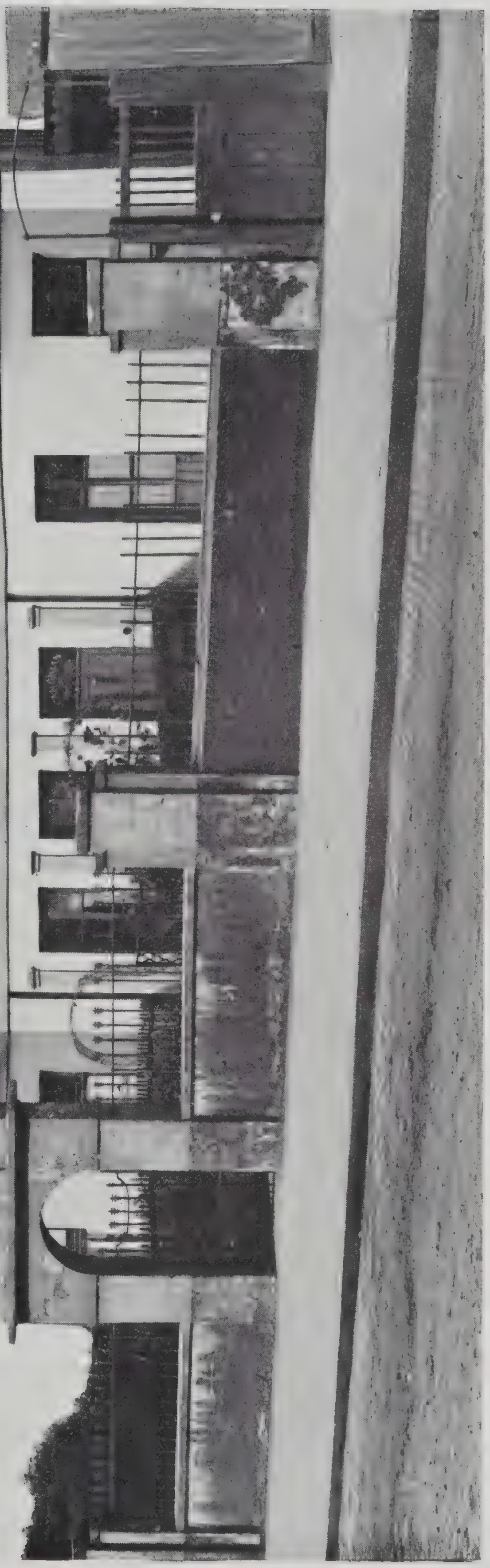


THE PALAIS DE JUS

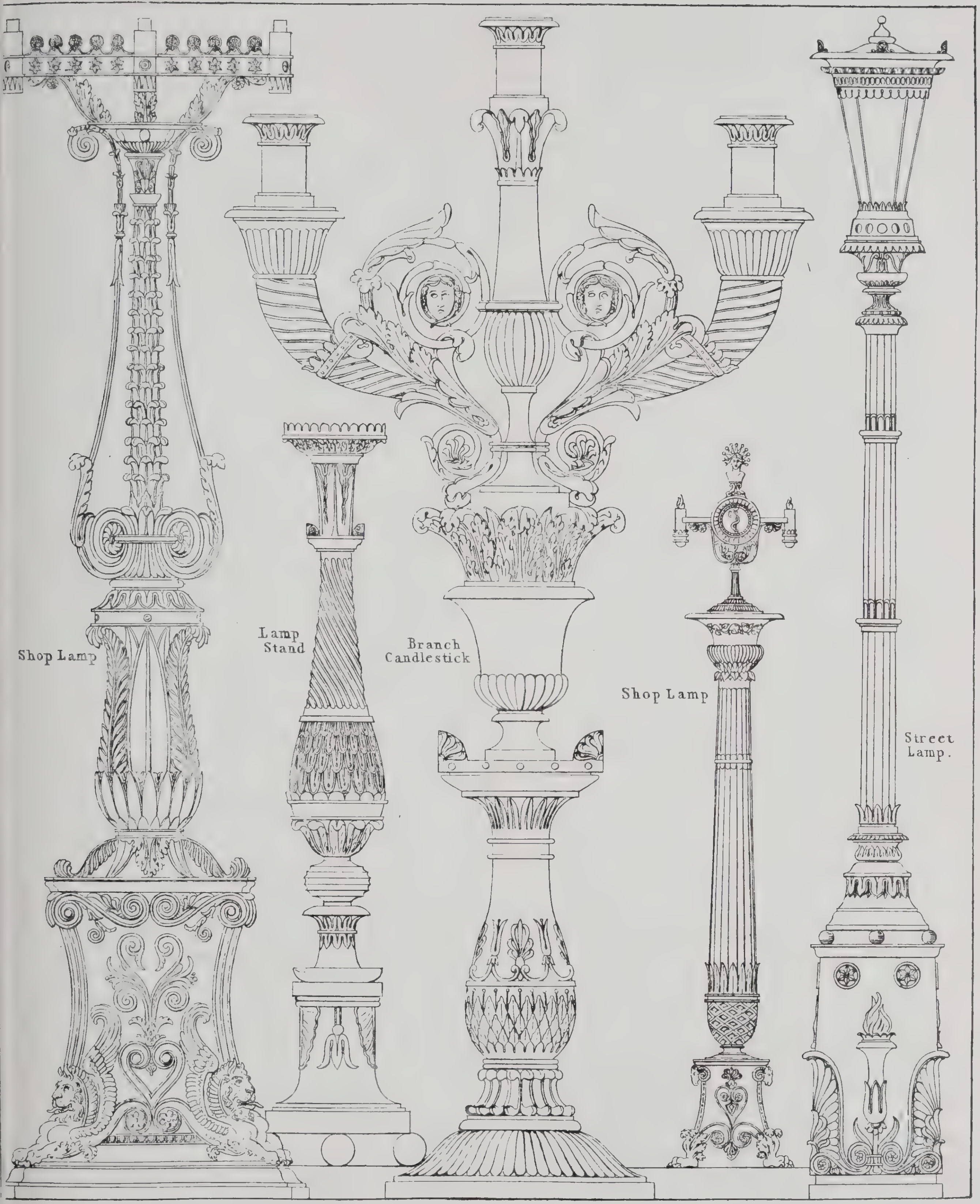


S. II.—LONGITUDINAL SECTION.

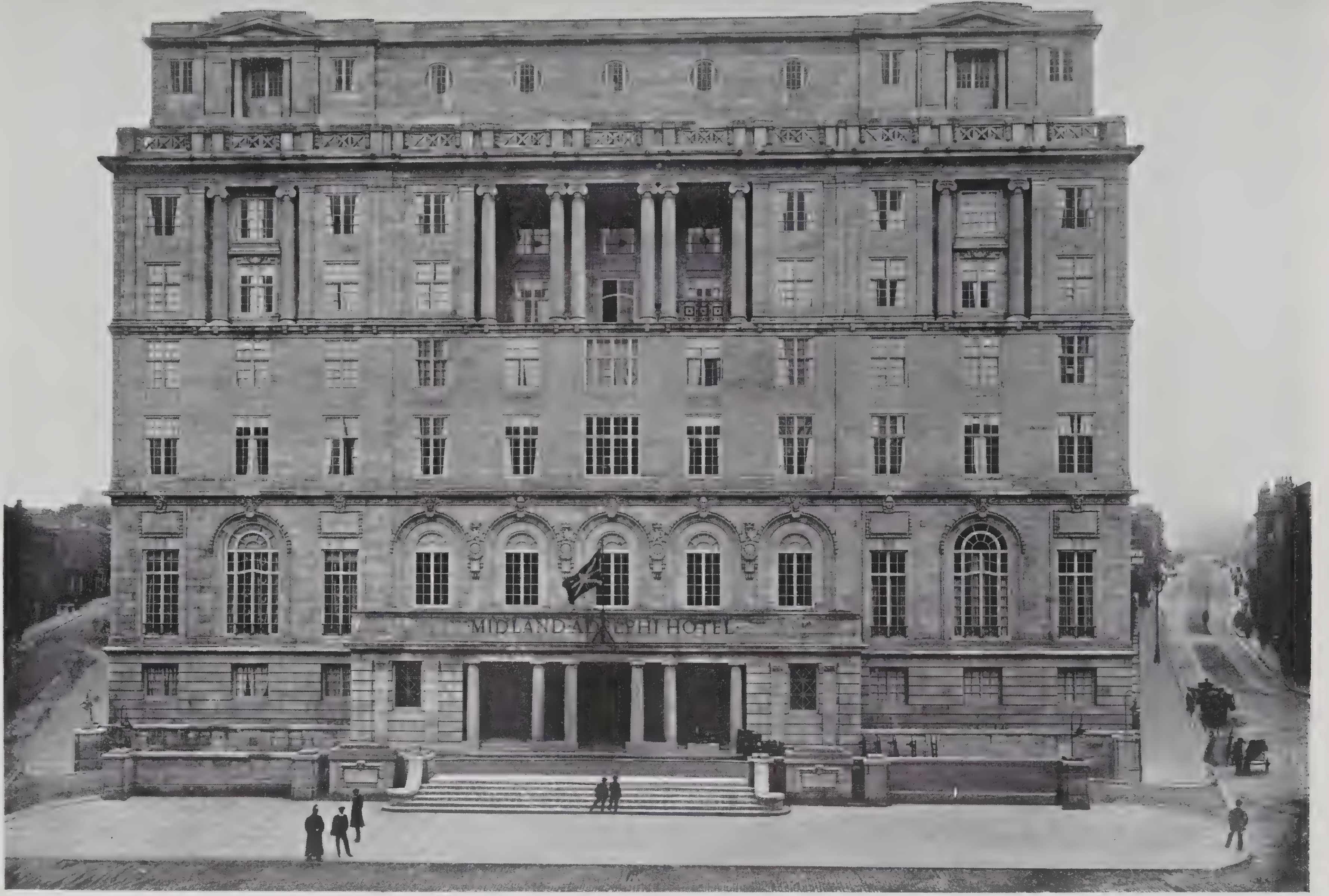
ARCHITECT.



SMALL HOUSES OF THE LATE GEORGIAN PERIOD. II.—HOUSE AT KENNINGTON, S.E.

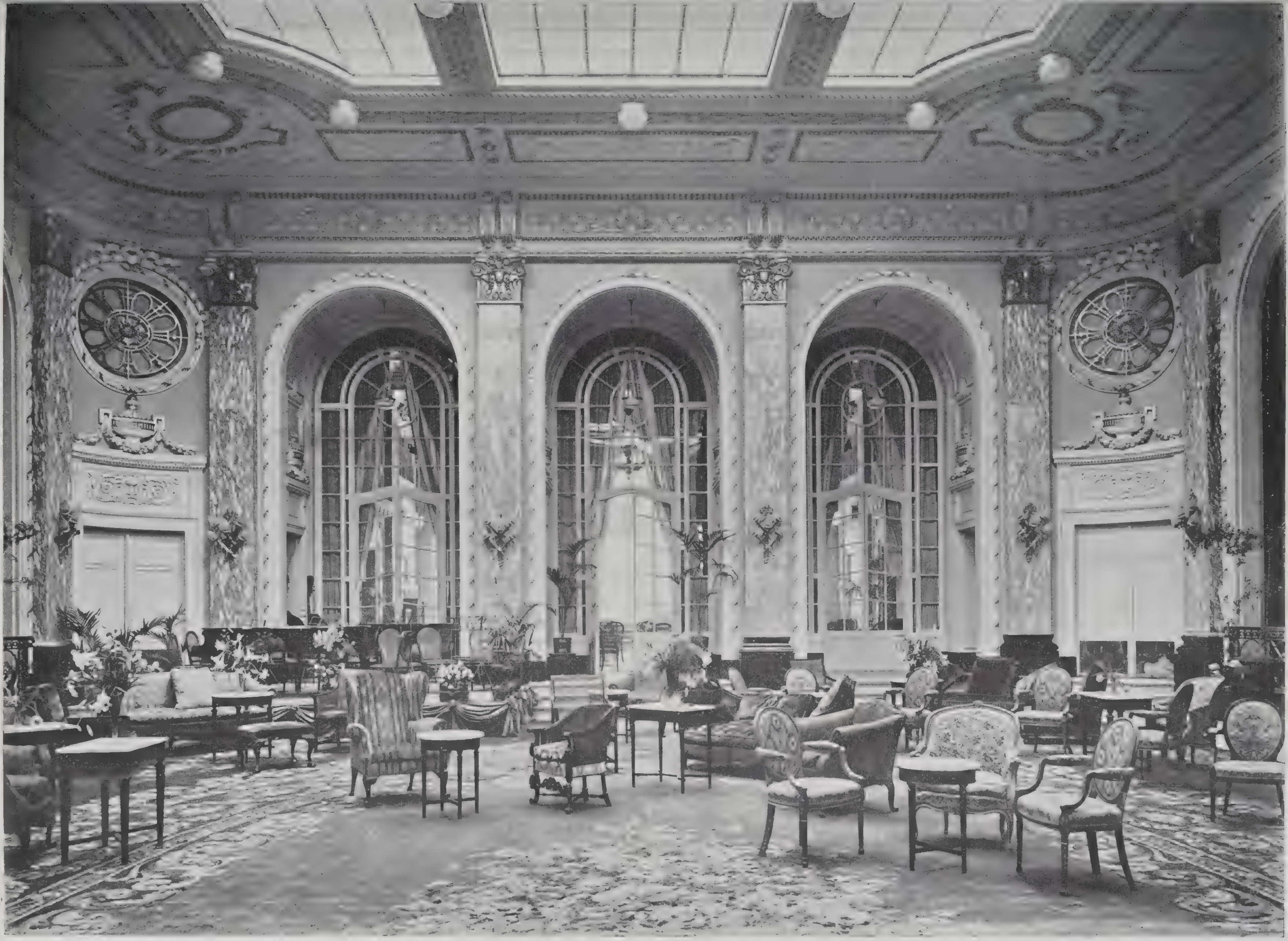


COTTINGHAM'S DESIGNS FOR IRONWORK. IX.—LAMPS AND CANDLESTICKS.



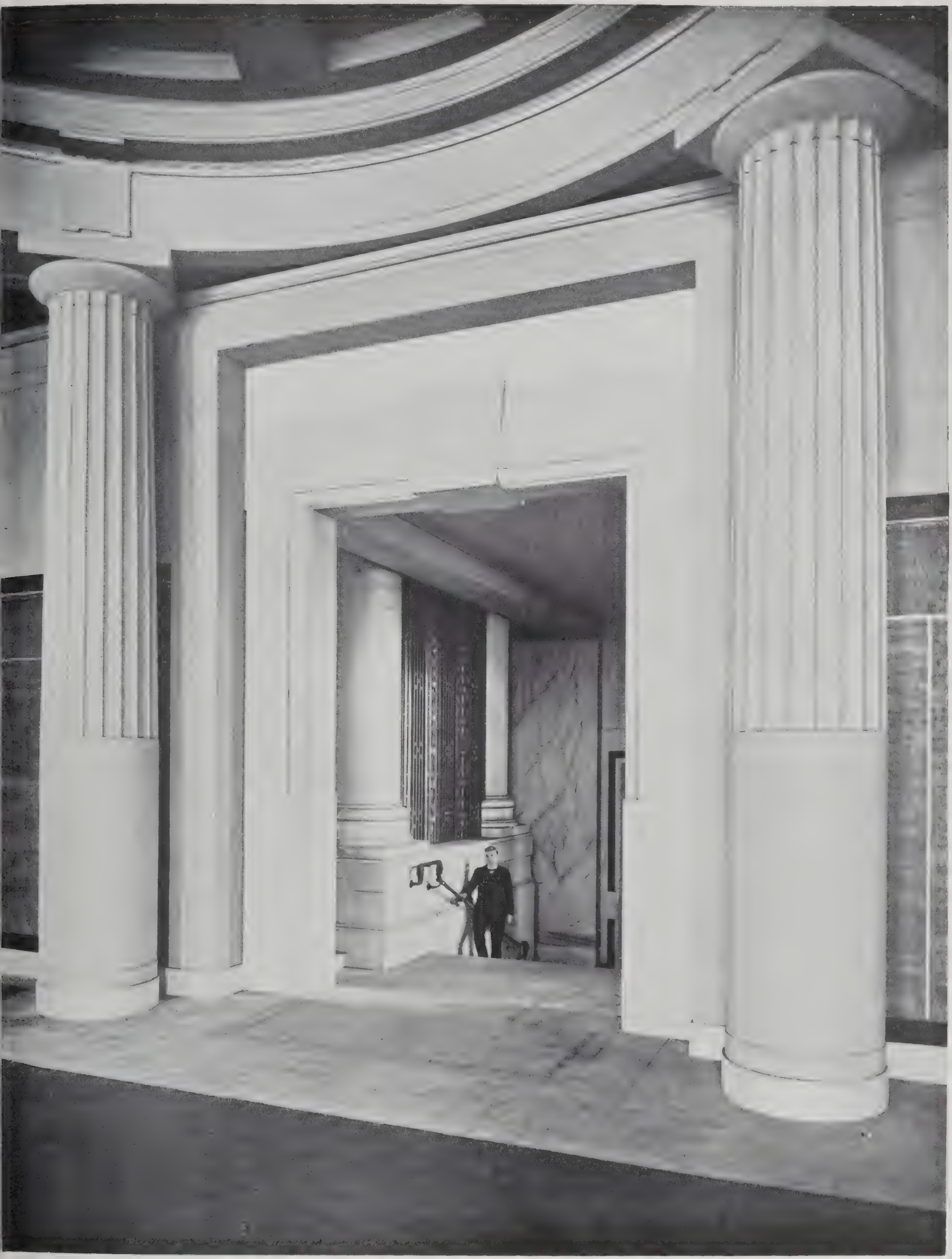
CURRENT ARCHITECTURE. L.—THE MIDLAND ADELPHI HOTEL, LIVERPOOL.

R. FRANK ATKINSON, F.R.I.B A., ARCHITECT.



CURRENT ARCHITECTURE. LI.—MIDLAND ADELPHI HOTEL, LIVERPOOL: THE MAIN COURT.

R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.



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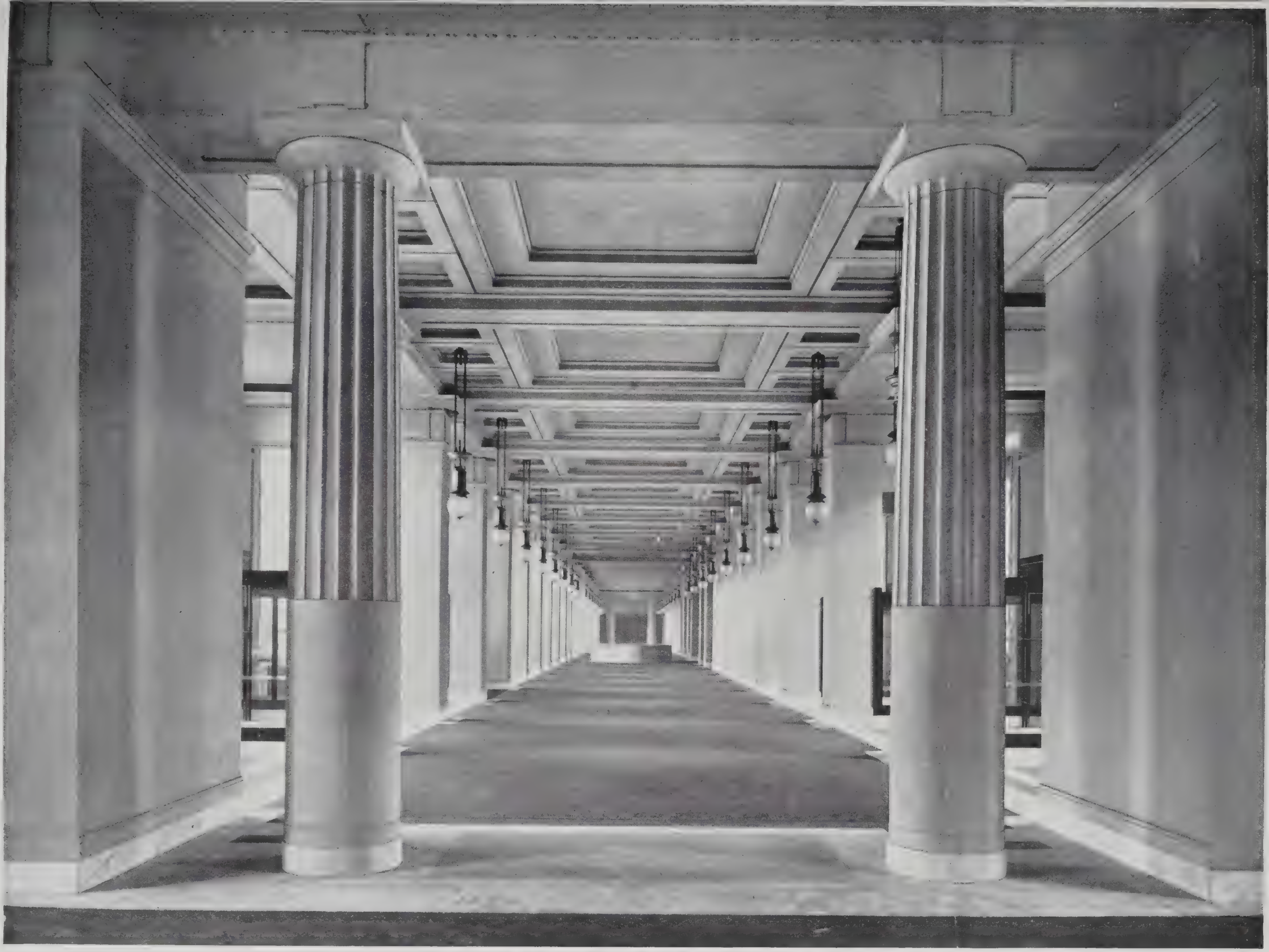
CURRENT ARCHITECTURE. LII.—BRITISH MUSEUM EXTENSION, MONTAGUE PLACE, LONDON: ENTRANCE TO FIRST-FLOOR GALLERY.

JOHN J. BURNET, LL.D., A.R.S.A., ARCHITECT.



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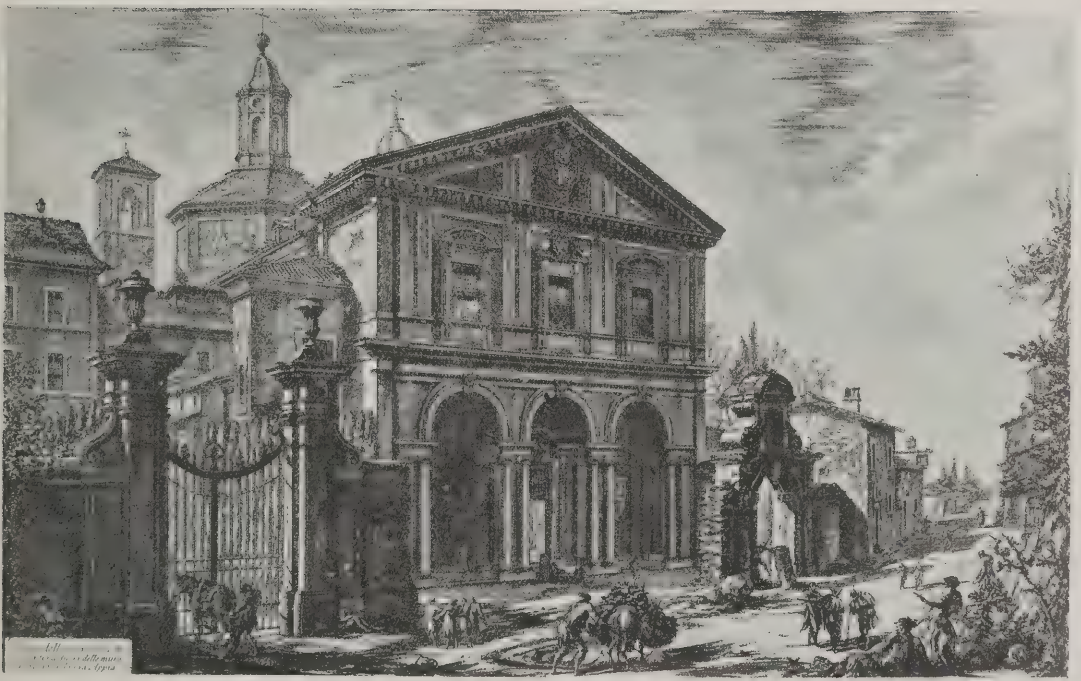
CURRENT ARCHITECTURE. LIII.—BRITISH MUSEUM EXTENSION, MONTAGUE PLACE, LONDON: FIRST-FLOOR GALLERY.

JOHN J. BURNET, LL.D., A.R.S.A., ARCHITECT.

THE
ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, April 8, 1914. Volume XXXIX. No. 1005.

No. 79



(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

APRIL 8, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1005.

Architecture and Climate.

IF there is one subject in the world which lends itself to sonorous platitude, the relation between architecture and climate is that subject. Now, a platitude is nothing more than an obvious truth, and so one would naturally suppose that a man who loved platitude would also be a lover of truth. But this is seldom the case, and it is a remarkable fact that the writers who above all others have been wont to indulge in platitude have by no means been distinguished for clarity of thought or honesty of statement. Of course, one cannot include in this category the authors of those compositions so rare in the history of literature which are made up of sentences individually so uninteresting that they can only be described as jejune, but which by virtue of their cumulative effect are endowed with deep significance. The mighty fabric of mathematics is an example of a similar kind of composition; it is from top to bottom built up of platitudes, but then they are arranged in an intelligible sequence. In fact, the only excuse for saying obvious things is that by saying a great many of them one after another we may gradually arrive at conclusions equally true but not quite so obvious.

Let us see how a born platitudinarian approaches the subject of architecture and climate. In the first place he will tell us that the climate of the North differs from the climate of the South. This is indisputable. He will next give utterance to the profound generalisation that architecture is influenced by climate. Having shown such marked proficiency in geography and æsthetics, he will proceed to a still greater triumph in the realm of history and inform us that Classic Architecture had its origin in the South. If the matter ended there all would be well. Unfortunately, however, not content to rest upon his laurels, he is anxious to win his spurs as a logician, and with great self-confidence he will exclaim, "Classic Architecture is not suitable for our Northern climate." A more flagrant example of loose reasoning it is impossible to conceive, and yet how often have architectural students had this identical argument put before them! As the platitudinarian never fails to say many things with which everybody agrees, he does not acquit himself altogether without credit, and even his most questionable statements are vested with a certain plausibility. But he does not lead his argument to a fruitful issue; he does not create a logical structure, but is content and even delighted with mere fragments of discourse. He is like a man who places a brick upon the mantelpiece and asks us to admire it, oblivious of the fact that bricks are only admirable when collected in large numbers and made into a work of architecture. It is the peculiarity of the platitudinarian that he is seldom capable of placing even a few bricks on top of one another in such a manner that they remain in stable equilibrium. He makes one simple statement, and then a second which does not quite rest upon the first, and then a third which has a still more precarious footing. Scenting danger, he abandons the argument, starts again upon a new tack and makes another simple statement which he is equally incapable of expanc
And so on. The extreme inconsequence of the al
dicta concerning architecture and climate will bec
obvious on investigation. It will be a profitable
to take each of the premises separately and,
elaborating them, see what is their real bearing
the subject at issue.

"The climate of the North differs from the cli
of the South." Of course it does. In the Sout
Europe there is less rain than in the North; the
also more heat and the light is stronger. It is
that these conditions have certain effects upon a
tectural forms. As to what these effects are the
ample room for difference of opinion. In former t
the windows of houses in southern countries were n
small—to keep out the heat. To-day, howeve
India and similar places large windows are prefer
plenty of air is thus admitted into the rooms, v
spreading balconies protect them from the sun.
possible to contend that in England the windows o
to be fairly small—to keep out the cold; on the c
hand many people tell us that in northern climes l
windows are a necessity, for we want as much su
we can get. As a matter of fact climate has no d
mining influence upon the dimensions of windows
must be remembered that the purposes for whi
room is employed have more to do with the size c
apertures than has the temperature of the surroun
air. Nowadays, moreover, we have artificial hea
so that a Norwegian, if he pleased, could live
comfortably in a palace of glass. We must
inquire whether climate has any determining influ
upon the shape of roofs. Long ago it had a cons
able one, but in modern times it is quite within
resources of the builder to make low-pitched, or
flat, roofs water-tight. There remain to be consid
mouldings, ornament and colour. It may be adm
that the strength of light in any particular region
certainly be taken into account by any architect
wishes to use ornament or colour with propriety
there are only two respects in which there must
different treatment in high and low latitudes. I
first place there is less reflected light in Nort
countries; the Parthenon frieze would not appe
advantage if disposed in its original manne
England. Secondly, buildings of bright hue are r
crude when seen beneath a grey sky, whereas, in p
where the sun's rays beat fiercely, striking contras
colour are more permissible because an intense
does much to equalise the tone of all objects
which it falls.

"Architecture is influenced by climate." We
seen that it is, though not to such an extent as is s
times supposed. The actual forms of archite
may be influenced by climate, but surely not its s
For it is the nature of a style that it embod
principle which can find expression in every pos
type of structure. A "style" that could not be us
both hot and cold countries, that was not eq
appropriate for all buildings public and private,
not be a style at all. It would be just as ineffe

ludicrous as the butcher in "The Hunting of the
rk" who "could only kill beavers."

the Classic style windows can be of all sizes,
, pedimented, or treated in a hundred other ways.
n the employment of a steep roof is no bar to the
tion of a Classic façade; some of the loveliest
ch buildings are distinguished by this combination
elements. Coloured and uncoloured buildings,
ment in high relief or low relief, mouldings heavy
fined are equally in the repertoire of the Classic
. Its critics are at liberty to attack it upon other
nds, but they cannot justly charge it with an
ility to adapt itself to various degrees of heat,
, or moisture.

people who ask us to assume that because Classic
itecture arose in the South it is unsuitable for our
hern climate, we may reply that European civilisa-
also arose in the South, and the tradition of
ling derived from Greece and Rome is an integral
of that civilisation. If our English cities were
ived of every stately fabric that is founded upon
tradition, they would be mere overgrown villages,
roduct of a parochial society.

A. T. E.

Architectural Competitions.

IE "Contract Record" has raised the question
whether architectural competitions are in the
best interests of the profession, and is disposed
swer it in the negative. The first objection put
ard is economic: the cost of competitions to the
tects collectively amounts to about the sum
would be collected by the successful archi-
for his entire services in connection with the
ion of the building. The second objection is that
andidates in competitions always work, to a
er or lesser degree, in the dark, and that even the
who is awarded first prize has to revise his plans
derably after consulting the committee. These
nents carry weight, but on the other side are
s equally worthy of attention. A man may have
n marked ability to grasp constructive problems
sign, but that is no guarantee that his design for
articular building involved will not have to be
d, even if he has given special stuay to the sub-
He will, of course, set to work with a closer
ledge of the conditions than would be possessed
ordinary body of competitors; even so, profes-
history is full of instances where a committee,
endless and fruitless wrangling, has discarded its
n architect's design. In short, there is no safety,
for committee or architect, in any one method
ection. But if it is desired to avoid friction, or
of time and energy, the limited competition
obvious advantages, while providing that
lus to the profession which the method of direct
ion seems to us to withhold.

Lectures on Art.

ST week Mr. S. Kaines Smith began his course
of lectures at the National Gallery, and we have
little doubt that if the lecturer's ideas on the
es are as stimulating as those put forward in his
on "Greek Art and National Life," he will not
to wait long for his audience. The desired
ce, according to the official statement, is to con-
not more than twenty-five persons, but of course
is nothing to prevent a casual visitor from attach-
mself to the party. The institution of these lec-
which are now being given not only at the
al Gallery, but at the Wallace and Tate collec-
has already justified the belief that there was a
r demand for this kind of thing, and the idea is
lly bound to develop and extend its radius. We
however, whether the lecture will ever become
ular as it is in the States, where the thirst for
re" in the tabloid form of a lecture amounts to a mania. However, we have made a beginning. One wonders, by the way, how many of the educated public in this country realise that free "culture" in architectural matters is provided almost every week of the year by the Architectural Association and the Institute for the benefit not only of their members, but of anybody else who cares to attend?

Disappointments of Town-planners.

ALREADY the enthusiasts of town-planning are tasting the bitterness of misinterpretation by disciples. It is of the nature of the case that pioneers should thus see of the travail of their souls and be more or less dissatisfied; the disciple sometimes halting by the way, or going beyond the prescribed goal, or erring and straying into some by-path meadow. Bradford is planning a suburb, and the Garden Cities hot-gospellers withhold from it their blessing. "Unhappily," a local writer observes, "while Bradford folk have been flattering themselves upon the prospect of a great step forward, the idealist town-planner is disappointed at the whole affair." There are to be no grass margins to the roads; and the idealists are appalled at the prospect of 42 ft. of conventional macadam surface. The casuist in the "Mikado" might say of the disappointed town-planner that "he was right so to object . . . and everything is quite correct"; for while it is the fate of ideals to be eternally superior to realisation, it is their function to secure betterment that without their energising influence could not have accrued. But the disgruntled town-planners do well to be angry. If they were complacently satisfied with every more or less imperfect attempt to interpret their high ideals, much wholesome and disciplinary criticism would be missed.

Housing Influences.

FOR lack of a platform other than the pulpit, clergymen do not sufficiently reveal their peculiarly intimate knowledge of social conditions. How great a service they could render in making public their experience and views with respect to the more practical aspects of the housing question was shown in an admirable address delivered last week by the Rev. E. G. Wells, of St. Mary's, Southampton. He stated that in Southampton there are some five or six thousand people living under conditions that are recognised as overcrowding, and that in his opinion this number could be multiplied four or five times if the expression "overcrowding" were held to include instances of moral (or immoral) as distinguished from official overcrowding: which is another illustration of the fallacies of statistical records. Mr. Wells showed also that measures supposedly remedial may sometimes have the effect of aggravating the disease: as when a sanitary inspector orders the closing of a house, and the evicted tenants are taken in elsewhere, to create a fresh case of overcrowding. Another point, and one that is not sufficiently taken into account, is that the population of to-day, having been subjected to some sort of schooling process, is more delicately sensitive to its surroundings than were the pre-compulsory-education populations. This is probably meant to refer mainly to physical degeneration and the consequent greater susceptibility to physical influences: but one may read into it a greater impressionability to surroundings of a less material character, and it is heartbreaking to think of the hordes of young children whose increased sensitiveness is turned to disastrous issues through the manifold evil effects of insanitary and altogether ugly surroundings. Nor, by the way, is the influence of the school limited to the mere production of more intense sensibility. The building, its decoration, and its fittings, make a lasting impression which should be, and often is, most carefully taken into account by the architect who is more than a perfunctory practitioner.

Charter or Bill.

WE publish this week a letter from the Secretary of the Society of Architects, together with the copy of a communication addressed to the provincial architectural societies by the President of the Institute, in which the Institute's intention to oppose the Society's Registration Bill in Parliament is definitely set forth. For the present we withhold comment on either of these documents, as we feel that the scanty facts at present in our possession are insufficient to enable us to form an impartial judgment on the merits of the quarrel. We shall, however, have occasion to deal with it in the near future.

Brighton Pavilion.

ERRONEOUS reports having been circulated as to what is happening to the Royal Pavilion at Brighton, the Mayor of the town has written to the papers to state that George IV.'s breakfast-room, which is also known as the "Red Drawing-room," and is described under that title in Nash's work on the Pavilion, is being retained intact, with the original decorations. The additional cloak-room accommodation which is being provided will affect only certain passages and rooms occupied in former days by the King's private secretary. If the *bizarre* conglomeration of Oriental domes that collectively represent the Royal Brighton Pavilion is not to be obliterated utterly—and many architects would regret its disappearance, though assuredly not on purely architectural grounds—it should be allowed to remain intact, since it is only tolerable as a complete Georgian freak.

The Late Sir Hubert Von Herkomer.

THE death of Sir Hubert Von Herkomer removes a singularly gifted and interesting personality from the roll of artists. A Bavarian by birth, the record of his own career from its very humble beginnings to its heyday in this country was told very simply and comprehensively in his autobiography a few years ago; and we need do no more than recall his enormous versatility as a craftsman and the brilliant success of the art school he established at Bushey. The keynote of his own art practice was its intense virility. Whether in the large subject pictures which won him reputation or in his many portraits, this was always the paramount quality, expressed through a craftsmanship innate in the man. He became an Academician, but this honour did not lead, as it has led in so many cases, to the narrowing of his artistic endeavour; his energy was always seeking and finding new media of expression—in etching, engraving, metal work, enamel, in a now historic theatrical enterprise, in a brave attempt to leaven the commercialism of the cinematograph with the principles of æsthetic taste. His, indeed, was the full life, the many-sided life of the Renaissance artist-craftsman, whose versatility he emulated and whose honest unaffectedness, in life as in art, he shared.

Glasgow Bridge.

GLASGOW has of late concerned itself greatly with the question of further cross-river communication, the Oswald Street site being the one that commends itself to most people for an additional bridge; and now, we are glad to note the Council of the Glasgow Institute of Architects has had the matter under consideration, and arrived at some pointed conclusions. In the Institute a strong feeling exists that an additional bridge in the centre of the city is not in itself a solution of the problem. Accordingly, the Corporation is recommended to obtain at this stage the co-operation of town-planning experts who would evolve a comprehensive scheme embracing the whole situation, or in other words, a town-planning scheme in which the bridge would be a prominent feature. It is,
of course, obvious that architectural changes
modern city can only succeed if carried out on
such lines; the days have passed when a bridge
be built without reference to the road system or
plan in which it was to form a feature. Corpora
are beginning to realise this truth, but it is just as
that there should be an architectural authority or
occasionally to remind them of it.

A New House of Commons!

A DELIGHTFULLY drastic remedy fo
notoriously bad ventilation of the Hou
Commons was suggested by an eminent
engineer to the Select Committee of inquiry int
subject. Years of ineffectual endeavour having
wasted on the old House, inasmuch as the me
(as, indeed, the political records of most of them
to show) still suffer, physically as well as meta
cally, from hot heads and cold feet, it only rema
try the one cure not hitherto attempted. You c
ventilate the building. Why not build the ventila
The engineering expert recommends the building
new House of Commons, semicircular in form, o
site of Palace Yard. It is a very fascinating i
from the engineering rather than from the arc
tural point of view. And lest a round buildi
static principles should still fail of a free "circula
of air carefully filtered from all physical and po
impurities, and delicately adjusted in colour an
grance to the special idiosyncrasy of each me
why not make it rotatable, so that Governmen
Opposition could catch the favouring breeze tur
turn about? If, however, this suggestion is thou
be too revolutionary, there is no need to cumbe
gracious space of Palace Yard. Suitable rot
already exist; and the idea of migration being al
familiar in the instance of London University,
is now lodging in the Imperial Institute, and by
quarter-day may possibly remove to more conve
apartments in Somerset House, no great shock
growingly impassive public mind would ensue o
House of Commons taking up its quarters in one
existing circular buildings—say, the Albert Hall
reading-room of the British Museum. There a
course, two very strong objections to a radical cu
would rob members of a long-standing grievance
they would not willingly part with; and of the
convenient excuse for the dulness of their spe
But we are not without hope that the present in
will establish some really practicable conclusion.

A PRACTICAL CHART OF TOW PLANNING PROCEDURE.

WE shall begin to publish in next week's J
a Practical Chart of Town Planning
dure, for Schemes promoted by
Authorities, which has been compiled for us by
Iveson Denham, Assistant-Solicitor to the Hu
field Corporation, and Mr. L. St. G. Wilkinson,
A.M.I.C.E., Assistant-Engineer to the same body
proposal is to issue this chart in a series of s
ments, each showing a stage in Town Planning
cedure, and the stages are so arranged that wh
have been issued it will be easy by connecting
successive sections to show the chart as a con
whole. An explanatory introduction to the stu
the chart will appear in the same issue as th
stage. Subsequently, and in the same way, we
publish a similar chart for Owners' Schemes, ad
by Local Authorities. These charts, which
thoroughly up-to-date, are remarkably luc
arrangement, and should prove of great interes
value to all who are interested in the present fo
movement in town planning.

HERE AND THERE.

HE Cold Feet Committee being engaged again
with evidence as to the ventilation of the House
of Commons, we may begin to wonder whether
matter will ever reach finality. But Government
irs are proverbially slow-moving. Trafalgar
are, for instance, was an unconscionably long time
ing itself completed. It was commenced about
, at which period the area was covered by a most
oxious and disreputable collection of houses, with
e courts and alleys winding in amongst them. This
lley of bricks and mortar on the south side of the
g's Mews rejoiced in cookshops of such varied and
rising quality that the place became known as the
mudas, the Caribbee Islands, and Porridge Island.
son was set up on his column by 1843, but the lions
e missing for more than twenty years, and when
tually they emerged from Landseer's studio it was
that the Percy lion, staunch and stiff on the top of
thumberland House, did not acknowledge them
rethren. The monument, by the way, is consider-
shorter than originally projected. It was to have
165 ft., but the Government of the day were
er alarmed at that, and having taken the advice
n architect (Sir Robert Smirke) and an engineer
Walker) on the subject, decided that 20 ft. should
ut off the top, Sir Robert Peel remarking, rather
ely, in the House of Commons, that it would be
tremely inconvenient" if the column were to fall
crowded a part of the metropolis! Accordingly,
tip of Nelson's hat is 145 ft. above the pavement.
rather curious to get up on one of the roofs of
ring Cross and see how elongated the figure
ears from that elevated standpoint. From the
t, of course, Nelson is seen foreshortened, and does
appear to be so very big, but, actually, there is
t. of our Hero. Baily was the architect of the
ite shaft, and Railton the sculptor of the statue.

* * * *

here was a wail at the Institute the other night
if only literary men would leave architects alone,
itecture would look after itself very nicely. Pro-
ly I should be led to that view if I took stock of
he harm which Ruskin did in those magnificently
ten books of his. At the same time it is well to
ember that the criticism of the outsider and the
an may sometimes be very timely. The profes-
al man, brought up in the usual professional way, is
y to take the usual professional view from start to
h, and to disregard all other opinions, either
use he has swallowed his precepts as a matter of
se, and thought no more of their real significance,
ecause he has never had the courage to oppose
self to the fashion of the moment. After all, it is
ry difficult thing to take up a position in opposition
hat adopted by leading men of the profession.
it does not follow that the latter must necessarily
ight. Hence the outsider, with no professional
tation at stake, may be able to offer the archi-
some helpful criticism. At the present moment
outsider is having a good innings, and architects
in consequence very much upset about him. As,
ever, they are not a united body, but composed of
who hold entirely different and opposing views as
e best course to pursue, they are not able to meet
utsider with that overwhelming force of opinion
h they otherwise would be able to exert, but
h, judging by the development of events, it seems
ly likely they ever will possess. One of the best
s they could do, therefore, would be to cease all
talk about the "inner meaning of architecture,"
spirit of the age," and so forth. It leads nowhere
l, and simply involves architects in a whole series
oblematical questions which had far better be left
The philosophers have done the same sort of thing in regard to the human emotions, but a brave deed or a cowardly one is not applauded nor decried by the community a whit the more or less on account of all this analysis.

In addition to matters of planning and construction, architecture has always seemed to me to be pre-eminently an affair of composition and form. Parts of a façade are disposed, or should be, purely as a problem in form; and no man will be the better architect by going outside the plain facts before him in order to indulge in metaphysics.

* * * *

As bearing on the question of orthodoxy in architecture, it may not be inappropriate to quote the following fable from an old issue of the "Echo." In this particular case Whistler's views were in question, but the same inference might be extended to modern architectural debate. It runs thus: A lively young donkey sang to the dawn, and so disturbed all the district that the neighbours surrounded him, begging him to desist. But he continued his braying for some time, and ended with what appeared, to his own ears, a flourish of surpassing brilliance. "Will you be good enough to stop that hideous noise?" said the neighbours. "Great Olympus," said the donkey, "did you say hideous noise? Why, it is a symphony, a concord of sweet sounds." "On the contrary," said the neighbours, "we think it is a cacophony, a discord of bad sounds." "How absurdly you talk," said the donkey. "I will refer to my brother asses, and let them decide." The donkeys decided that the young donkey's song was a most symphonious and harmonious sweet song, so he continued to bray unmelodiously as ever. The moral, of course, is that you can never be sure that the opinion of the orthodox family is above suspicion.

* * * *

Arising out of the considerations mentioned in the preceding column, it will, I think, be generally admitted, by those who have given any serious attention to the subject, that one of the great failings of modern architecture is its restlessness and its want of composition and good form. On building after building in our cities we see the same faults. Above all else, too many features are introduced. Architects seem to be afraid of an unbroken piece of wall, so must needs clap on pilasters, panels, wreaths, and similar trappings. When, therefore, one comes upon a façade which is comparatively flat, undisturbed by redundant misapplied ornaments, the eye hails it with pleasure. In London, for instance, to walk out of one of the main thoroughfares, where the buildings positively bristle with features, and to turn aside into some old street—perhaps an eighteenth-century square—is to encounter an architectural haven that is positively assuaging. When that work was produced architects may or may not have been anything like so well versed in the æsthetics of design as many are to-day, but they certainly had a far better conception of architectural form, and they knew the proper use of the material at their disposal. Only a few days ago I saw a most convincing example of this in a certain London square, where the work of a distinguished architect may be seen in conjunction with that of an unknown man of the eighteenth century. The one is a painful attempt to do something, the other looks like little else than a careful disposition of windows and doors in a plain wall surface; but there is a sense of repose and dignity about the latter which the other work entirely lacks. The designer of the one may or may not have been a self-conscious artist, but he certainly was an artist of some sort, whereas the modern work proclaims the architect to be no artist at all.

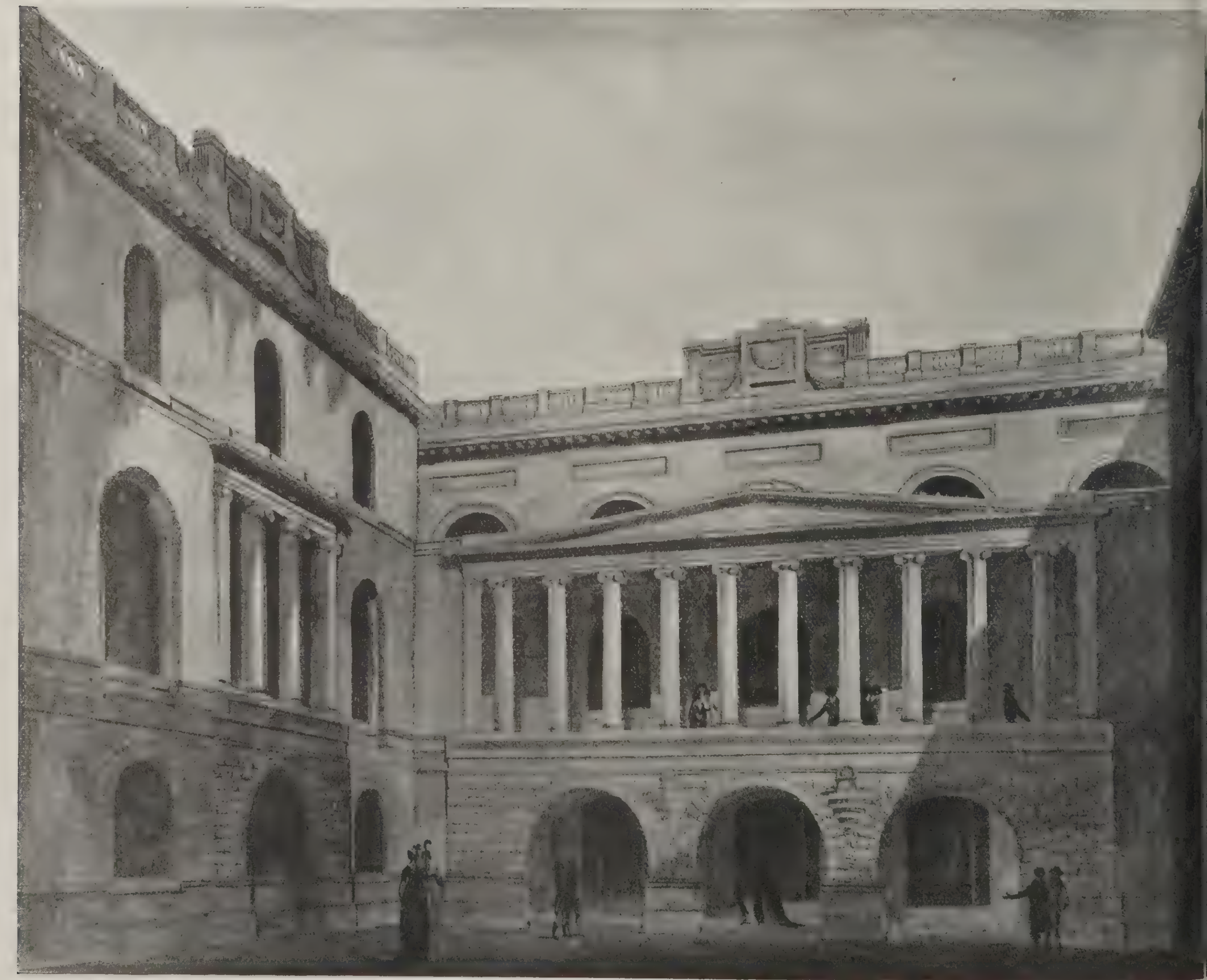
UBIQUE.

MODERN ARCHITECTS:—I. SIR JOHN SOANE.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

BEFORE trying to estimate the powers of an architect we must always ask the question, "What is his range?" Now, his range is measured not only by the number and variety of the buildings which were actually executed from his designs; we must also take into consideration the works which he conceived, but which were never materialised in brick or stone. His imaginative essays cannot be disregarded, for they often tell us more of his real nature than do the severely utilitarian schemes which it is generally his lot to carry out. There are some men who do not think it necessary to have a range at all. They are content to go on designing hospitals, elementary schools, swimming-baths, hotels, or cinema-theatres without ever varying their subject. It may be that circumstances have driven them to such a course. When a man has once erected a hospital in which the practical needs of such a building have been well satisfied, he is often overwhelmed with commissions to build hospitals; but he will never have any great reputation as an architect unless he can show that he is capable of designing a multiplicity of other buildings, and it is only by conceiving his own in relation to these latter that he can endow it with an appropriate character. If he is not fortunate enough to have opportunities of erecting every kind of edifice, then he must supplement the designs of the particular structures he is called upon to erect with the designs
of numerous other buildings and groups of builc
which, as far as possible, should include every a
tectural form expressive of the needs of a mo
society. We are assuming now that he is ambi
and desires to influence the work of his succes
The architects destined to live are those who ma
definite contribution to the theory of design, and
a contribution can only come from those who
taken as their subject not a part of architecture, bu
whole. It seems necessary to insist upon this in c
that a standard of criticism may be asserted.

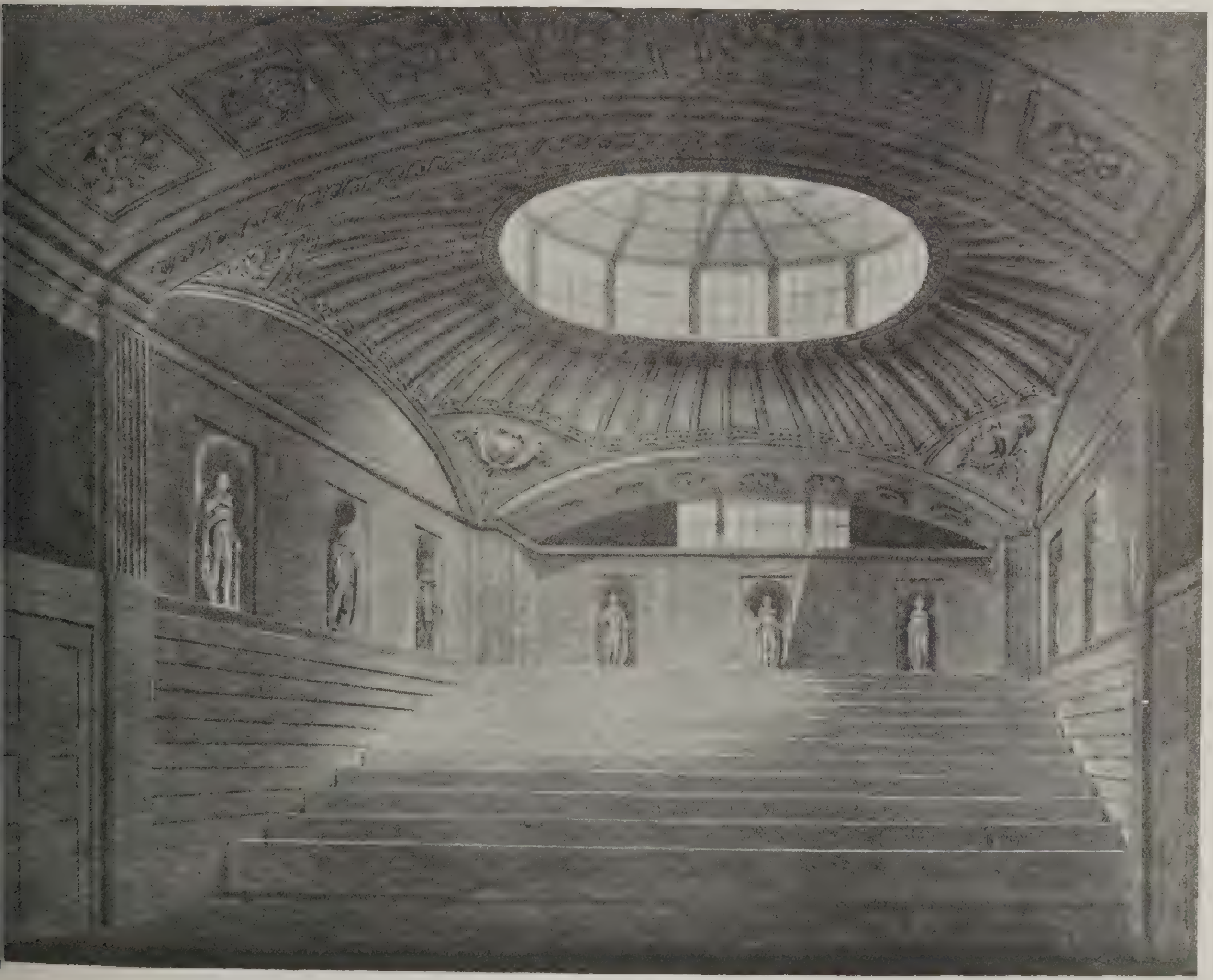
Sir John Soane designed banks, churches, the
House of Lords, Government offices, law cc
picture-galleries, several shops, many private hc
both in town and country, palaces, stone screens
other monuments, and even bridges. Now, this is
test that must be applied to these buildings. Are
of such a kind that we could endure to inhabit a w
in which every building had been designed by
John Soane? Of course, this is a severe test, b
is the only true philosophical test by which an a
tect can be judged. If his work has not this univ
character, it is a sure proof that he is guilt
mannerisms, that he looks at his art with a na
vision, and that his style takes rank among t
inferior things of which it is said that "a little gc
long way." But it must be made clear that two th
are being criticised—the Classic manner of buil



DESIGN FOR WAITING-ROOM COURT, BANK OF ENGLAND. BY SIR JOHN SOANE.

h Soane adopted, and Soane's own capacity of pting it. It may be that this manner of building certain limitations that will always prevent it from ining to universality, in which case Soane is not to e for such limitations. On the other hand, it is eivable that Soane, while using the Classic instru- t to the best of his ability, did not play upon all its gs. He will be entitled to fame, however, if it be shown that although he confined himself to a ewhat restricted range of chords he yet succeeded mposing some new and beautiful melodies.

may, perhaps, not be amiss at this place to give a brief biographical sketch. Soane was born at ding in 1752, and came to London at an early age his father, who was a builder. When about fifteen vas placed with Dance, and shortly afterwards he red Holland's office. In 1772, being a student of the al Academy, he was awarded the silver medal for est drawing of the Banqueting House, Whitehall. r years later he obtained the gold medal for the design for a triumphal bridge. Two separate mes are to be found among the drawings in the um at Lincoln's Inn Fields. Both of them show influence of Dance, and the broad ramps at the nces to the bridge are heavily rusticated. These gns are of interest as showing the taste of the d, but they can hardly be considered successful. idge which carries several enclosed courts and a da has lost its character completely. The people ese courts would not have the least conception they were on a bridge at all, while these tall, solid lings obstruct the view of the river from all sides. ly all prize designs for "A triumphal bridge" ar to have these faults. Soane, always a severe critic of his own work, in one of his Academy lectures compares this early effort with a bridge by Sandby, to the advantage of the latter. "In this design," he says, "the large masses are placed not like Mr. Sandby's in the solid earth, but over each of the extreme arches, and the centre, still heavier in appearance, staggers the mind as to its practicability. These three large features, not assimilating with each other nor sufficiently connected with the intermediate parts, look more like so many distinct masses than one great building. Thus the whole design becomes deficient in that continuity and harmony so happily preserved by Mr. Sandby. These observations are not to the credit of my own design, but the Professor of Architecture is called upon to communicate such observations as are likely to tend to the improvement of the student." This passage throws a favourable light upon the character of Soane. While still a youth his ability attracted the attention of Sir William Chambers, who introduced him to George III. He was then sent to pursue his studies at Rome with the Academy pension of £60 per annum for three years. There he continued till 1780, and studied assiduously the remains of ancient art. On returning to England he commenced a large practice. In 1788, on the death of Sir Robert Taylor, he was appointed architect and surveyor of the Bank of England. This latter must be counted his chief work, and he expended the greatest care upon its composition. It was his custom to produce five or six finished schemes before deciding upon the final design. The now celebrated circular end at the junction of Prince's and Lothbury Streets was the result of long deliberation, and it must have been a matter of difficulty to choose between the various treatments that



DESIGN FOR NEW SALE ROOM, EAST INDIA HOUSE, LEADENHALL STREET, LONDON. BY SIR JOHN SOANE.

were suggested. One of these, consisting of a concave arrangement of the corner façade, is especially beautiful, and it is unfortunate that Soane was unable to make use of that particular motif elsewhere. Soane contended with the difficulties of the site with great success, and he showed great judgment in adopting the admirable composition of the old bank buildings by Robert Taylor. This respect for the work of a predecessor is rare, especially among architects of genius. Soane would have made an admirable restorer of ancient edifices! The long, low façade of the Bank of England would not at first sight present much opportunity for artistic effect, but Soane was able to impart the requisite interest to the wall surface, which by its solidity is yet admirably suggestive of a bank. It is a pity that the public is not admitted to the interior courts, which are distinguished by some most original methods of treatment. Some of these courts are so small in area in comparison with their height that they would have had the appearance of wells if it had not been for the exceedingly skilful manner in which he disposed of the architectural features with which they were decorated. In the illustration given the colonnade, surmounted by a flat pediment, by being placed in a rather low position seems to alter the proportion of the whole court. As there is a pronounced centre of interest half way up the façade, we feel no need to crane our necks and gaze up at the sky as we instinctively do in the average hotel court. This design affords an example of the uses to which column and pediment can be put. Some critics would contend that both the columns and the pediment have been improperly employed, the former because they were placed there for effect and not in order to carry a great weight, the latter because it does not represent the gable end of a roof. This is an ignorant criticism expressed in the language of the engineer, for it ignores completely the æsthetic aspect of architecture. We have shown that for the comfort and pleasure of the spectator it is necessary for there to be a centre of interest in this particular place, and what more graceful arrangement can there be than a row of columns, and how can these be so effectively gathered together into a unity as by a pediment? The highly original use of the anthemion ornament between the arches occurs also in the design for a triumphal bridge to which reference has been made. The Bank of England contains some of Soane's most beautiful interiors.

Among his other works may be counted Pall Mall, a banking house in Fleet Street, Dulwich Picture Gallery, a mausoleum, numbers 156-172, Regent Street, (1820-21), Westminster Law Courts (1820-27), and the Scala Regia and Royal Library of the House of Lords. His later works comprise Trinity Church, Marylebone, the Board of Trade Offices, Whitehall, and the State Paper Office.

In connection with the House of Lords he experienced a great disappointment. A committee had been appointed to consider what alterations could properly be made to render the house, offices, etc., more convenient. He made the requisite surveys, plans, etc., but although his designs were approved by the King, the execution of the work fell to the lot of James Wyatt. He was deeply offended at this slight.

Sir John Soane became Professor of Architecture at the Royal Academy in 1806, and he gave up much of his time to the service of this institution. It was largely for the benefit of students at the Royal Academy that he collected all the casts, fragments of sculpture, models, and pictures which can now be seen at the museum in Lincoln's Inn Fields. This collection of works of art (valued at £30,000) he bequeathed to the nation. He died in 1837 at the age of eighty-five.

The drawings have been photographed by the kind permission of Mr. Walter L. Spiers, the Curator of the Soane Museum, Lincoln's Inn Fields.

THE PLATES.

THE interest of our plates this week is div
fairly evenly between the architecture of ye
day and to-day. In connection with the artic
the work of Sir John Soane—the first of three w
we shall publish on this subject—by Mr. A
Edwards, we give as specimens of monumental a
tecture Soane's fine designs for the *Bank of Engla*
Stock Office and the *Scala Regia: House of L*
We predict that they will come as a revelation to n
who have only a superficial knowledge of Soane's

These two plates are followed by two others o
Midland Adelphi Hotel, Liverpool: a *Detail o*
Principal Façade, and an interior, *The Fr*
Restaurant of the hotel. This latter was equi
and decorated by Messrs. Hampton and Sons,
in the style of the Louis Seize period. The plan o
room is oblong, with semi-elliptical ends, and
alcoves at the four corners. The walls are pan
with sycamore, finished to a silver-grey tone, and i
with specially selected woods; and the preva
colour of hangings, coverings, and carpet is a del
rose.

This week's example of late Georgian dom
architecture, a *House on Champion Hill, S.E*
typical of a large class of similar houses found ar
London and the larger provincial towns.
characterised by a severe simplicity, set off with
most perfect detail. The porch, main cornice,
cases for sun blinds have all been very carefully
sidered, and the iron railings and gates are thorou
well designed. Our Student's Drawing, *Design*
Necropolis, belongs to a Grand Prix competitio
the early 'eighties. M. Legrand, the author, w
pupil of M. Pascal. In its appropriateness as a de
and its discreet use of sculptural ornament, it re
its author's aspiration to monumental Classic arch
ture.

Finally, we publish a working drawing mad
Messrs. Ivor Jones and Percy Thomas for the C
Technical Institute, showing *Details of Main Ent*
Door and Vestibule Doors, etc. Other drawings o
fine series have previously appeared in the Jou
and we need not recapitulate the points of interes

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or o
expressed by correspondents, who are asked to be brief, and to write on o
only of the paper.

Registration by "Charter" or by "Bill."

To the Editors of THE ARCHITECTS' AND BUILD
JOURNAL.

SIRS,—Plots and their discoveries are in th
even in architectural politics, if I may judge
communications which are reaching me conta
copies of a letter (see enclosure) sent on March
the President of the R.I.B.A. to the provincial a
tectural societies on the above subject.

In that letter it is stated that a resolution
"unanimously" passed at a special general meeti
the R.I.B.A. on January 5th last, committing
Institute to a new policy of "Registration by Cha
instead of "Registration by Bill," which policy is
pursued by the R.I.B.A. Council, relying upon
mandate.

It goes on to say that the Council of the Inst
have decided to oppose the Society of Archi
Registration Bill when it is presented to Parlia
on the ground that, if carried, it will be in the hi
degree injurious to the interests of the Royal Inst
and conflict fundamentally with the policy to
that body is now committed.

s the text of this Bill has been published, architects
form their own opinion on this statement, which in
judgment is contrary to fact. In regard to the
olution referred to, the printed minutes of that meet-
state that it was carried "nem con." and that the
eting was attended by 170 members, 15 per cent. of
om were members of the Council. If this is a correct
ord, then the vote was not unanimous. In any case,
does not necessarily represent the views of the
eral body.

resumably the present decision of the Council of
R.I.B.A. to oppose the Society's Registration Bill
been arrived at because they are aware that the
ged constitutional disability which it is understood
heir opinion prevents the Institute as a body from
moting a Registration Bill also prevents them as a
ly from opposing one. Such opposition as is
gested is limited under these circumstances to the
sons concerned, and does not necessarily represent
feeling of the general body or even of all the
nbers of the Council of the R.I.B.A., much less the
hes of the majority of the profession. It will,
efore, be possible to discount such opposition
uld occasion arise.

t was a foregone conclusion that the Council of the
.B.A. would, owing to their change of policy, oppose
Society's Registration Bill (though I perhaps might
ition en passant that they have forgotten to directly
ify the Society of their intention); but it has not
n clear hitherto on what grounds they would
eavour to justify such opposition. It is a great
ig to have secured a definite statement on this
it and the admission that action will be taken only
he interests of the Institute, and therefore, by
rence, not because the Council considered the
iety's proposals to be inimical to the interests of the
fession or of the community.

C. McARTHUR BUTLER.
Secretary of the Society.

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py of letter to provincial Architectural Societies.)
Royal Institute of British Architects, 9, Conduit
Street, London, W.

March 13th, 1914.

ear Sir,—Your Council will have observed in the
ort of the special general meeting of the R.I.B.A.
January 5th, 1914, that a resolution was unani-
sly passed, on the motion of Sir Aston Webb, which
mitted the Royal Institute of British Architects to
w policy, which may be briefly defined as "Regis-
ion by Charter," instead of "Registration by Bill."
his policy is the outcome of years of deliberation
successive committees representing both the Royal
itute and its allied societies throughout the
ntry, and it will now be energetically pursued by
Council, relying upon the mandate expressed by a
nimous vote of the general body, and they are
fident they will have the support of all the allied
eties in the work that lies before them.

ou are no doubt aware that the Society of
hitects propose to introduce into Parliament at an
y date a Registration Bill which, if carried, would
n the highest degree injurious to the interests of
Royal Institute, and would conflict fundamentally
the policy to which the Royal Institute is now
mitted. My Council have decided to oppose this
when it is presented, and they trust they will have
loyal support of your society in the course which
have decided to take.—Yours very truly,

(Signed) REGINALD BLOMFIELD.
President.

Wind Pressure and Chimney Stacks.

he Editors of THE ARCHITECTS' AND BUILDERS'
JOURNAL.

IRS,—The deduction by Mr. E. Alex. Young in
r issue of the 1st inst. of wind pressure of 60 lb. per foot super. and velocities of over 100 miles per hour comprises so much clever reasoning expressed with such delightful clearness that one feels some little diffidence in questioning the reliability of the conclusions arrived at.

In view, however, of the importance to design of the wind pressures deduced, it seems to be desirable to draw attention to the fact that they depend entirely upon certain assumptions which are by no means fully established.

These are:—

(a) That the joints which failed were as strong in tension as those in the centre of the stacks.

(b) That the leaning stacks are really spanning a horizontal distance of 7 ft.

(a) The joint at which the stacks failed would almost certainly be weakened by the insertion of flashing, and in all probability it would be further weakened by moisture round the junction of the stack and the slated roof. From this it would seem to be not unlikely that the wind pressure had little, if any, tensile resistance to overcome at that particular joint, in which case a wind pressure of 19 lb. per square foot would have sufficed to overturn the stack.

The necessary pressure might even have been smaller, for the wind pressure on the tall pots and its leverage is neglected in the calculation, and also the fact that such a stack would bend under pressure and thus reduce its small effective leverage of 9 in.

(b) In the absence of dimensions it would appear to be doubtful whether the inclined stack is really spanning a length of 7 ft. It appears to rise from the centre of the party wall between two back additions, and one does not often see a lean-to roof of 14 ft. span.

It is also not quite obvious why the dead weight of the leaning stack is taken at 3,700 lb. instead of $1\frac{1}{2}$ tons, or 3,360 lb. If the horizontal span were 5 ft. and the weight 3,360 lb., the calculated extreme stress on the joint would apparently be reduced from 25 to 16 lb. per square inch.

The data given scarcely appear to justify the assumption of pressures and velocities so greatly in excess of those recorded at the Forth Bridge and other high and exposed situations over periods of many years.

PERCY J. WALDRAM.

The Columns of the Parthenon.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—While recently examining the volume of plates of "Athenian Architecture" by F. C. Penrose, I noticed that in Plate 2, the plan showing the principal buildings on the Acropolis, the Parthenon is shown as having eighteen columns on the flanks. Is this known to be an error in engraving the plate, or can any of your readers give an explanation?

PERCY J. WILLIAMS.

Sound-proof Flooring.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—I write from the North, where it is usual to "deafen" our floors with a deafening composition and plaster the ceiling in the usual way. We observe that in the South, particularly in the picturesque type of house, the joists are exposed, in some cases resting on cross-beams of large scantling. I think it would be of interest if any of your correspondents or yourselves would make a feature in the Journal of showing by sketches and otherwise the details of the methods adopted, especially in connection with the deafening of floors where very little of the upper part of the joist is available for "deafening composition," and the scantlings and spacing usually adopted in average work.

NORTHERN ARCHITECT.

THE WORK OF BODLEY AND GARNER.

BY F. C. EDEN.

A paper on this subject was read by Mr. F. C. Eden before the Architectural Association on March 30 last. The work of Bentley, whose drawings are also on view at the Association's premises, was also to have been dealt with, but the reading of this paper was unavoidably postponed. An admirable collection of drawings by Bodlev and Garner was afterwards inspected by members and visitors.

The accusation of copyism (said Mr. Eden) has been so often brought against the Gothic revival that many believe it to be justified, in spite of the fact that the alleged fraudulent antiques could deceive none but the most ignorant. The art of these two gifted men, though it makes full and avowed use of the Gothic machinery, just as Milton and Wren made use of the Classical machinery for their purposes, is in no sense obnoxious to this charge.

Mr. Bodley's earliest works, St. Michael's, Brighton, and St. Martin's Scarborough, were produced in an excusable state of reaction against the influences at work in Sir Gilbert Scott's office, where he had served his pupilage, and betray a rather stiff though not exactly immature manner. The latter church is notable for the collaboration of Rossetti, Morris, and Madox Brown in the decorative details. But his fully developed style, from which he never afterwards departed, first appears in the simple but very sumptuously fitted and decorated Church of St. John, Tue Brook, built in the year 1866, about the time when he took Mr. Garner into partnership.

The work of these artists falls naturally into four periods: (1) Before the partnership, when Mr. Bodley was working alone, and produced, in addition to the churches mentioned above, St. Salvador's, Dundee, and some small houses at Malvern Link, which are interesting as perhaps the earliest examples of revived Georgian. (2) After he was joined by Mr. Garner, when the partners were collaborating in intimate association, say, roughly, from 1866 to 1884. During this, which may be called the culminating period, the following were the chief works produced: The churches at Hoar Cross and Pendlebury; work at Christ Church, Oxford; and the School Board Offices. (3) About the year 1884 the dual authorship ceased, the partners having agreed that each design must be the work of one mind; and thenceforward the share of each in the work of the firm becomes distinct and easily separate. Mr. Bodley's churches at Clumber, Epping, Danehill, Hackney Wick, and Cowley belong to this period, as do the following works of Mr. Garner: The St. Paul's reredos; St. Michael's, Camden Town; St. Swithin's Buildings at Magdalen College, Oxford; the magnificent design submitted in the first abortive competition for Liverpool Cathedral, and Lord Plymouth's great house, Hewell Grange. (4) Lastly, after the definite dissolution of partnership, when Mr. Bodley carried out a large number of churches and made designs for cathedrals at Washington and San Francisco, upon which last he was working at the time of his fatal illness.

The early seventies are remarkable in the annals of church building for the erection of the two most remarkable churches which have been built since the time of Wren, viz., Hoar Cross and Pendlebury. The former is a country church standing among trees on the edge of a park, built by Mrs. Meynell Ingram as a memorial to her husband. To anyone familiar only with the ordinary ruck of Gothic revival work it comes as a revelation. It is impossible to believe that this refined and poetic creation is contemporary with the masses of jejune and sterile stuff which mark the mid-Victorian era.

St. Augustine's, Pendlebury, is situated not amid trees and grass, but in a Manchester suburb. It is a simple lofty parallelogram, dominating by sheer bulk the flat squalor of its surroundings as perhaps no more complicated building could do.

It was one of the earliest buildings in which the foreign system of passage aisles through internal buttresses was adopted, and remains the most successful.

Clumber is the first church of importance which Mr. Bodley carried out after the partners had agreed to work independently. It is a small cruciform building, surmounted by a lofty spire of red stone, and rises with quiet dignity out of the level turf of the Duke of Newcastle's garden.

In the time at my disposal it is only possible to indicate in the most summary fashion the peculiar qualities of Bodley and Garner's work.

First I should place excellence of proportion, a quality in which it hardly ever fails, and, next, dignity and repose. There are no signs of strife and struggle, of a desire to command attention by shouting or preaching which marks so much contemporary work; it is always gentlemanly. Further, I would note the care bestowed upon the minutest detail; their absolute indifference to changing fashions; and lastly, their signal achievements in colour decoration, the side of his work in which Mr. Bodley took the greatest delight, and in which he stood absolutely unrivalled. It was his sensitiveness to colour effects that caused him to realise early in his career, as his more prominent contemporaries never did, that bare brick is as impossible for a church interior as it would be for a drawing-room if any decorative refinement is to be obtained. He felt that such rough-and-ready colour effects as are to be got by diapering walls with stripes and zigzags of variegated brick, though suitable enough externally, are far too geometrical and coarse to be satisfactory indoors.

Another matter, perhaps a small one, in which they were in advance of their contemporaries is the following. It used to be laid down as axiomatic that the wooden and other fittings of a church must be of the same period as that to which the structure was supposed to conform. I remember a lecturer solemnly declaring, "I would not go so far as to say that if you are designing a Norman church your furniture should be strictly Norman, but short of this it must agree in the period with the building to which it belongs."

Though the bulk of their church-work was based upon Fourteenth-century or Decorated Gothic, Bodley and Garner saw clearly that it was not until the Perpendicular period that the mediæval craftsmen fully understood the capabilities of woodwork, and so for their stalls, screens, and other fittings they always adopted the later treatment.

If one were to attempt to assess the contribution of each of the partners to joint results I think the following may be accepted as a fair estimate:

The poetic ideals, the sensitive and refined perceptions of Mr. Bodley were complementary to the executive ability, the industry, and scholarly knowledge of his partner, and as a result their best works
were produced during the period w
they were in the closest collaboration,
when interaction and advice were m
constant and intimate. Without
Garner's help Mr. Bodley's works so
times show a contented reliance on cert
simple effects of which he well knew
secret—effects which did not require
specially laborious working out. With
Mr. Bodley, Mr. Garner's exhibit an o
sional coarseness of detail, and a tende
to over-reliance on precedent. Each la
the corrective criticism and suggestion
the other.

BRICKS AND BRICK-MAKING

BY ARTHUR E. BROWN.

Recently Mr. Arthur E. Brown delive
an interesting lecture on this subject be
the Society of Architects, in the co
of which he discussed very fully the
perties of bricks of the clay descript
Geologically, he explained, clays w
found in two categories, surface clays
geological deposits. The first were fo
in all parts of the world in comparati
shallow beds, which had been deposite
ice, rivers, etc., in the Pleistocene per
The geological clays were of varying a
the Bagshot, London clay, Reading,
Gault beds being the most recent.
red Marls of Leicestershire, Warw
shire, and Wales were earlier, and
shales and fireclays of the coal measure
carboniferous period earlier still. C
possessed certain chemical and phys
properties in common. In some bran
of clay-making, chemistry was of great
portance, but its value in the more ordi
use of clay was comparatively mea
The reason of this was obvious.
brickmaker took three tons of clay
made it into a thousand bricks,
value of which, when finished,
about 30s. The cost of the
and the firing left so small a p
that there was little or no margin
the chemist on the raw material,
none whatever to admit of making
tures with materials brought from a
tance in order to vary the compositio
the native clay. The brick-maker, th
fore, had to content himself with inv
gating the chemical nature of his clay
using such expedients as might be fo
advisable to modify them in a suit
manner. After a brief sketch of the
stances forming clay, Mr. Brown said
in these matters chemical analysis wa
assistance, but, even so, practical exam
tion would tell us all we needed to kn
Passing to physics, the lecturer said th
was known that the more sticky the
was, the more it cracked when dried.
was because it was purer and conta
more of the gelatinous silicate of alun
in a given volume than a sandier cla
loam which shrank less in drying. In
case of a less sticky or "milder" clay,
amount it shrunk in drying depended
on the shape and size of the sand
ticles.

These were surrounded by the gelati
material when wet, and at a certain s
in drying they come so close together in
mass as to touch each other. Now, if
sand grains were rough and angular
further movement was arrested, whe
if fine and round they could slide on
another into still closer positions, an
shrinkage continued further.

When a clay with fine round sand gr
dried, shrinkage went on till arreste
the grains getting as close together a
possible, but still the gelatinous pure
surrounding them went on shrinking,

result that spaces or pores began to be ied in the mass, into which air red.

e thus arrived at another condition, in h the pores formed in the clay lually lost water throughout the whole s. The size of these pores depending he size and shape of the grains, we get different states in different kinds of . The one was called porosity and the r permeability. They were only dif-it degrees of the same thing, but they interesting to the brickmaker because he difference in quality of the brick uced and the different results obtained ifferent processes of manufacture.

r. Brown went on to demonstrate why ermeable brick was best for buildings. ess a wall was exposed to constant ing rain, in which case it should be hollow, water dried out very rapidly n rain stopped; the permeable brick ld usually dry out completely between ain periods, and before any water had trated the wall, whereas the porous would not. Then when the water permeable brick froze, the holes were enough to let the ice squeeze out n formed, and no harm was done. In rous brick the ice could not squeeze and so it burst the face off the brick ad. There were two kinds of brick, in h the properties of porosity and per-bility were different. In one type, ex-lified by the Fletton brick, the shale pressed into shape in a nearly dry , and plasticity was not present at any e of the process. When burned in the no change of physical condition of lay took place. Shale was in the form akes, and the interior of the brick, fore, was in an irregular condition no direct uniform pores or tubes in Yet it contained a proportion of spaces air in them. The outside surface more compressed than the inside, and smoothed or polished by the action of steel moulds in which they were sed. Therefore, after a long exposure et, frost would produce more disas- results than the porous "non-per-ble" brick. The second type was ex-lified by the Accrington red brick, also e by the semi-dry process. This was tically impervious to water, and was a sound brick. The permeable brick a further virtue as a non-conductor of and cold. On the whole, he thought a sandy, hand-made brick, besides g more artistic, was more lasting and artistic than any other type made.

Burning Processes.

ughly speaking, there were five dis- processes. The first and oldest was p burning, as practised in the yards ssex and Kent, and was characterised he mixing of the fuel with the clay e moulding the bricks. The bricks stacked closely, and air got access to so gradually that the heat was gene- l slowly and more or less regularly ghout. A clamp might take from eeks to three months to burn through, required a great deal of expert atten- to get good results. The burning of non bricks (other than stocks and in-ing Flettons), red bricks, tiles, and ricks was carried on in kilns of a great ty of types, fired with coal or gas. stages of kiln burning were steaming, g the heat, soaking, and cooling. describing these processes, the lec- remarked that one of the remarkable res of brick-burning was that though heat was expended on the process little was actually used. It was nearly rown away. He referred to his own invention in kilns, by which it was made possible to burn best-class goods such as Suffolk reds, tiles, chimney pots, etc., as well as in the old Suffolk kilns, but with 60 per cent. less coal and with less waste.

Types of Clay.

The principal types were the shales, marls, and surface clays. Shales were almost always made into bricks by the semi-dry process, although the plastic process might be used. Marls, so called because of the presence of carbonate of lime, were found chiefly in North Wales and Leicestershire. The presence of too much carbonate of lime was injurious, but clay existed containing as much as 40 per cent. that might be made into sound bricks. He gave a short description of the making of common bricks by the wire-cut system, as applied to these types of clay, and concluded with a brief sketch of the old process of hand brick-making and of the history of the art of brick-making.

BRISTOL ARCHITECTURE IN THE EIGHTEENTH CENTURY.

BY C. F. W. DENING, F.R.I.B.A.

Recently Mr. C. F. W. Dening gave a lecture at the Royal West of England Academy on "The Eighteenth Century Architecture of Bristol." Mr. Dening is hon. secretary of the Bristol Society of Architects, in connection with which the lecture was delivered. Mr. Mowbray A. Green, F.R.I.B.A., was in the chair.

Mr. Dening said that in considering the eighteenth-century architecture of Bristol it should be borne in mind that its development was not the gradual evolution generally associated with the production of "styles," or "periods," for the preceding century was a time of great depression and stagnation in building. Indeed, at the end of the seventeenth century the city was still tinged with the spirit of the Middle Ages. The streets were narrow and tortuous, and the houses with overhanging storeys were crowded together, shutting out both light and air. Latimer records that in 1638 buildings with overhanging storeys were still being erected, and in an ordinance for the Tilers' and Plasterers' Company, passed by the Council in 1671, it was decreed that if a member should cause any gentleman's house to be lathed outside or in with sappy laths he should be fined 6s. 8d.! It might be taken that practically to the end of the seventeenth century the method adopted for the small amount of building in progress was that of the timber-framed structure. With the dawn of the eighteenth century the reaction came. That was an age of prosperity to the city, and consequently of great building activity. The continuity of the former evolution of style being broken, the new buildings at once assumed the advanced character which was only obtained in other districts by a gradual growth. Latimer spoke of "the rage for building," and a comparison of the plans of Bristol at the end of the seventeenth and beginning of the nineteenth centuries showed the extent of the remodelling; the new portions were set out in a formal and architectural manner, and the important feature of the planning was the provision of open spaces or squares. The finest and largest was laid out in Marsh—now Queen Square—by the City Surveyors, who, together with the Mayor, were ordered to view the void ground to consider how it might be leased in plots for the uniform building of houses. That was in 1669. It was not, however, until 1701 that the first houses were erected. The use of brick as a local facing material was first mentioned in 1698. Bricks, however, were in use in 1671 for the fireplaces and chimneys. If one excepted isolated cases of detached houses, then generally the majority of the buildings during the first fifty years were of brick with a very sparing use of stone; but towards the latter part of the century, brick as a facing almost entirely disappeared and was superseded by stone. John Wood, of Bath, was credited with having introduced Bath stone into Bristol, but there were many instances of its being used before his connection with the city. Undoubtedly, his work at the Exchange revived the use of that easily worked stone, and important public buildings were carried out entirely in that material, which was, perhaps, more in sympathy with the Renaissance or Classic Palladian treatment of buildings assuming a monumental type. Mr. Dening traced the general development of architecture through the century, indicating the changes in the fronts, roofs, windows, and other features of the buildings, as well as the interiors. He said there was little record of those responsible for the bulk of work in Bristol during the eighteenth century. The works of eminent men, such as Vanbrugh and John Wood, were summed up in the former's work at Kings Weston and the latter's at the Exchange and Markets. James Gibbs, of Aberdeen, designed the monument to Edward Colston in All Saints' Church. Of the lesser lights John Strachan was credited with much work in Bristol, and also at Bath, where he worked in conjunction with Wood. Thomas Paty and his sons William and James carried out a great deal of their own designs and executed a large amount of wood-carving. William Halfpenny, architect and carpenter, published many treatises on architecture, but only one example of his work could be definitely assigned to him, viz., the Coopers' Hall, Old King Street. With the aid of a lantern, Mr. Dening showed upon the screen numerous examples of eighteenth-century work in Bristol, including the Corn Exchange, the old City Library, houses in Unity Street, College Green, Orchard Street, Prince Street, the Assembly Rooms (Prince Street), the interior of 7, Great George Street, and the reredos of several churches, to mention only a few of the illustrations.

A very hearty vote of thanks was accorded the lecturer, on the proposition of Mr. R. James, seconded by Mr. John E. Pritchard, and supported by Mr. E. W. Savory.

THE ANGLO-AMERICAN EXPOSITION.

At the forthcoming Anglo-American Exposition at Shepherd's Bush three galleries have been allotted to American artists resident in Great Britain. There is ample space for a very comprehensive exhibit, which will include the works of all the principal American artists now in this country, while the committee are making every effort to have their countrymen adequately represented. They wish it to be known that any American artist who has not received an exhibitor's form should notify the hon. secretary, Mr. Joseph Pennell, 3, Adelphi Terrace House, Robert Street, Strand, W.C., who will be pleased to send one.

THE ARCHITECT AND DOMESTIC PROBLEMS.

In the course of a paper read by Mr. Cloudesley Brereton before the Institute of Sanitary Engineers on April 1, in which special reference was made to the basement house, the lecturer dealt somewhat severely with the architect's alleged lack of consideration for the housekeeper's difficulties:

"Where a house is being built to order for some special tenant, the architect's way is of course clearer, and his work easier than in remodelling an old one; but even when a new house is being built he might be of more practical service to the mistress of the house than is always the case in the matter of labour problems, if he would place his knowledge and experience at her disposal, and attempt to enter into, not only the building of her house, but the service problems which are likely to arise, and which he can, if only he will, reduce to a minimum of difficulty. If a better type of servant is to be looked for in the immediate future, old-fashioned methods of heating, cooking, and water-heating will have to be superseded. The gas fire, the gas cooker, and the gas water-heater will, I am sure, play a very important part in the solution of the architectural difficulty. Lifts will save stairs; hot water will be available on every floor, and the distance between the rooms where the meals are cooked and where they are served will be reduced to a minimum, and awkward and dangerous steps and dark corners avoided. Sinks for washing up will be placed at convenient heights to avoid stooping, and taps for drawing hot and cold water into pails while they stand on the floor will be provided, both upstairs and down, and sinks for washing up will be placed in light places near or under windows.

Reform the Old Houses.

We are, however, considering to-night mainly the question of the houses already built; those in which almost every architectural fault that the mind of man or fiend could devise has been committed. And these make up in our towns perhaps 50 per cent. of the houses lived in by ordinary mortals with a medium-sized purse. The stairs are frequently narrow, dark and steep; the passages long, winding and full of corners introduced in the most ingenious way; the linen cupboards, larders, and all the essential places for storage that a country woman prides herself upon, and superintends so thoroughly herself, are dark, unventilated, and frequently as far away from the place they serve as ingenuity or stupidity can put them. The larder, perhaps is at the far end of the basement from the kitchen, because an endeavour was made by the architect to put the kitchen in the front of the house so that it might have a suspicion of daylight if only through a chink of glass in the pavement above. Then, having planked the kitchen down there, it was found that the larder must go at the back in the most inconvenient place in relation to the kitchen, and frequently next to the servants' lavatory, because the coal cellar was bound to come at the front of the house in order that a hole might be made in the pavement through which to shoot the necessary coal into a "Black Hole of Calcutta." One result of this is that food, which in a well-designed house would be transferred to a common plate and put straight into a cool larder, is instead, when brought down from the dining-room, or brought in from the tradesmen's entrance, allowed to make a temporary sojourn on the kitchen table and in proximity to the glowing kitchen range, to be the hot-bed for flies and the breeding ground for any obnoxious germs that happen to be about.

Owing, I suppose, to the fact that servants were considered as inferior creatures, one is frequently driven to suppose, even where there is no basement, that the architect designed the drawing-room, but the devil designed the kitchens.

NOTES ON SHORING.

The writer recalls reading in a text-book a very cogent remark to the effect that the intricate forms of joints in carpenter's work are to be admired more for the ingenuity of their device and the skill necessary for their formation than for their efficacy, and that the simpler types are to be preferred for use, as there is a greater possibility of their being formed correctly. This should be at once obvious to everyone, yet how often does one see unnecessary labour being put into even temporary structures, apparently for the very joy of it—or from mere convention—where its elimination would bring nothing but benefit. For instance, the very usual and generally advocated form of construction for a raking shore is as Fig. 1, and the procedure in erecting it is first to fit the wall plate and needle, then the sole plate, and obtain the angles for cuts by means of a line and bevel. The method of tightening the shore is to "prise" the foot inwards with a crowbar as shown in Fig. 2—a chase being left for its insertion. The slightest error in cutting the raker will necessitate more or less of this "prising," and a badly fitting joint is the consequence.

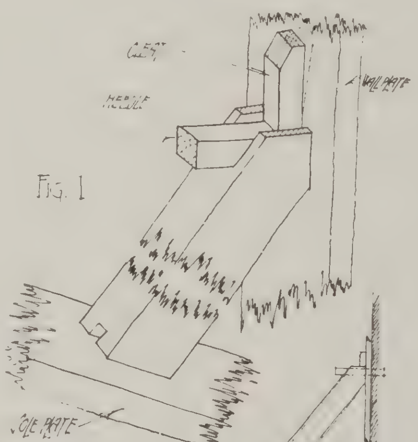


Fig. 1

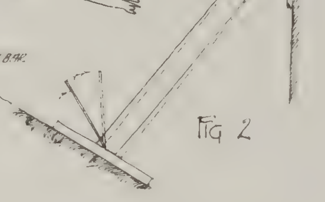


Fig 2

Fig. 4, although exaggerated, shows a state of affairs that is by no means uncommon, and its disadvantages would be apparent even to one of those hypothetical clerks of works one from time to time hears of who have served their apprenticeship in a draper's shop.

The simpler form shown in Fig. 3 has the following advantages: The raker can be cut and placed in position with the certainty that it will remain so—snug up to its work; the absence of the cheeks permits of the needle being as wide as the raker—an important point, as upon the strength of this depends the efficacy of the whole structure; the folding wedges permit fine adjustment, and their easy rem allows the shore to be dismantled wi the use of force, which is so often pr tive of injury to the building whose w ness was the primary cause of its ere Finally, it is much cheaper, and wh object to it on that score?

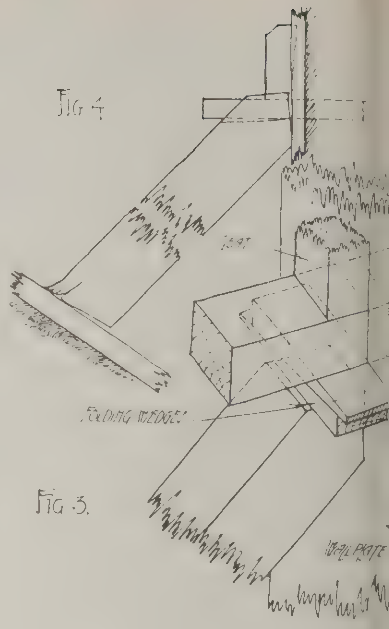


Fig 4

Fig 3.

While on the subject, it may not b of place to point out that a fruitful of the cracks, which are often a res shoring operations in which the s structure is, for the time being, wholl ported upon dead shores and needl the lack of stiffness in the latter, an this reason the writer advocates th of rolled steel joists, as they are less ject to deflection than the stiffest of t balks (and a deflection of an eighth inch is sufficient to cause a serious ru in a building); further, they are to handle, require a much smaller for their insertion, and allow much of the work to be pinned up before removal. They are objected to by on account of a supposed liability t but if it is made certain that the nee perfectly level (not in all cases an un sary precaution) and the work is sta as it always should be—by rakers, no need be entertained on this score.

It is a *sine qua non* that all r shores should be square in section, an use of deals bolted together shou avoided, as they lack the stiffness of a balk—unless the joints be keyed to pr

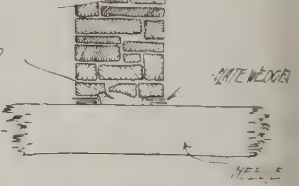


Fig. 5

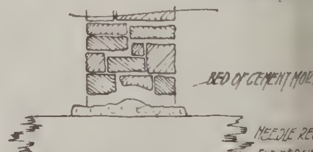


Fig. 6

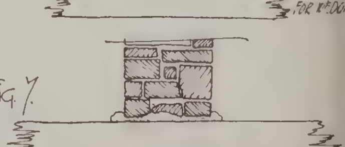


Fig. 7.

sliding upon one another—yet one
iently sees rakers composed of a
le of deals bolted together, their depth
ading the combined width by perhaps
per cent., which, when erected, can be
ed by the strength of a child. What
be expected of these if called upon to
any part in the support of the
ling?

very usual practice in dead shoring is
sert the needle and wedge up the work
he outsides with pieces of slate, as
n in Fig. 5. This throws all the
ht on the outside edges of the wall,
if it is not efficiently bonded through-
its width, or, as was in the past a
common practice in stone districts,
vall is composed of an outside skin of
ashlar or brickwork, the interior being
e, the result is often disastrous. A
better way is to cut the hole through
h the needle is to be threaded suffi-
ly deep to allow of a good thick bed
irly stiff cement mortar (familiarly
n by the artisan as "compo") being
d upon its upper surface as shown in
6. When the shoring is finally
ed up this will accommodate itself to
e irregularities of the work which is
supported and ensure an even dis-
tion of the weight. (See Fig. 7.)

may be thought that the points to
h attention has been drawn are fairly
ous and trivial, yet it is often the
ous which is overlooked, and attention
fles spells all the difference between a
and an indifferent job.

L. E. W.

IETIES AND INSTITUTIONS.

ARCHITECTURAL ASSOCIATION OF IRELAND.

meeting of the Architectural Associa-
of Ireland was held in the Civil Engi-
' Hall, 35, Dawson Street, on the 26th
Mr. George F. Beckett, M.R.I.A.I.,
e chair. The house list of members
g to serve as officers, and on the
mittee of the Association, was read,
scrutineers of the ballot appointed.
following were elected members of the
ciation: Mr. J. J. Bruntz and Mr.
ey Grant.

e Rev. H. Browne, M.A., read a
r on Mr. W. H. Goodyear's "Archi-
ral Theories," the object of the lec-
being to pave the way for Mr. Good-
s approaching visit to Dublin, which
een arranged for the month of May
e Classical Association, in conjunc-
with the Architectural Societies of
nd.

e lecturer apologised for not being
chitect, and hoped that, under the cir-
tances, his temerity in coming before
iety of architects to lecture on archi-
ral theories would be forgiven. He
d have to deal not merely with
etic principles in which all might
to share, but also with somewhat
ical points. In the latter case he
ld merely try to lay before the audi-
the views of Goodyear, leaving them
e consideration of those who had
ledge and experience of such matters.
slides would illuminate curvatures
other refinements universally
tted to exist in Greek temples, but
would be preparatory to the con-
ation of the important question
her analogous refinements exist in the
mediæval architecture, and, if so,
her it is to be admitted that the prac-
of introducing them was due to the influence of Classical traditions. He would deal first with departures, in plan and elevation, from strict geometrical forms; then with leaning (*i.e.*, overhanging) façades in Italian cathedrals; and, lastly, with the widening refinement in the lofty naves of Gothic cathedrals of Northern France. This, he added, might be claimed as the most characteristic and in every way the most important of Goodyear's theories.

The lecturer regretted that, with regard to the great English cathedrals (which were undoubtedly built under French influence and in some cases by French architects) no plumbings and measurements for this widening refinement have as yet been taken, or at least published. But, even in the examination of photographs, he thought he had been able to detect very clear evidence in two cases—those of Salisbury and Canterbury—of the refinement, and evidence which he believed could not be accounted for by camera distortion. He trusted that a more complete and satisfactory investigation would be undertaken at some not distant date.

It was also gratifying to those who believe in the truth of Mr. Goodyear's methods and results that news had just come to hand that an American committee of experts, appointed to report on the whole matter, have done so in a very favourable sense. The lecturer concluded by saying that he had no doubt that Mr. Goodyear's stay in Dublin would be an agreeable one, both for himself and for those who would assist in the reception which was being jointly organised by the different societies.

Mr. Hudman proposed, and Mr. J. Geoghegan seconded, a vote of thanks to the lecturer. The Chairman, in putting the motion, stated that the President was absent through ill-health. They all welcomed Professor Browne, who had played a leading part in arranging for the keenly anticipated visit.

The resolution was passed with acclamation.

EDINBURGH ARCHITECTURAL ASSOCIATION.

Through the generosity of one of its oldest members—Sir R. Rowand Anderson—this Association has been enabled to offer for competition amongst the younger members of the profession in Scotland, two travelling studentships of £40 each for the encouragement of the study of the development of steel construction, more particularly as exemplified in the work of France and Germany—the aim of the donor being to direct attention to the manner in which steel work is being treated in the most modern buildings abroad.

The successful candidates are required to expend not less than eight weeks on the Continent, during which time they will study, examine, and make detailed drawings, sketches—and if possible photographs of this class of work—amplified by descriptive notes—it being the intention of the Association to publish the whole in book form if of sufficient merit.

Applications, accompanied by testimonies of study, have been received from various parts of Scotland showing a high standard of merit, and these have now been considered by the committee in charge, who have, after full consideration, awarded the prizes to Mr. James M. Brown, presently assistant with Messrs. Alex. Cullen, Lochhead and Brown, Hamilton, and Mr. William Paterson, A.R.I.B.A., of Edinburgh.

Both these gentlemen are to undertake the duties of the studentship in the course of the coming summer.

THE INSTITUTE OF BUILDERS.

The thirtieth annual general meeting of the Institute of Builders was held at Koh-i-Noor House, Kingsway, W.C., on Wednesday, March 25.

The audited accounts for the year ending December 31, 1913, and the annual report were received and adopted.

The following officers were appointed for the coming year:

President, Mr. F. G. Rice; Vice-Presidents, Mr. E. J. Strange, Mr. Leonard Horner, Mr. G. Bird Godson, Mr. Walter Lawrence, jun.; treasurer, Mr. James S. Holliday.

The following were elected on the Executive Council:

Messrs. F. J. Gayer, E. J. Hill, R. J. Holliday, F. M. May, S. Smethurst, J.P., and A. W. Turnbull.

NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.

The winter programme of the above society concluded with an informal social and smoker at the society's rooms on March 17.

The principal designs submitted by the students during the session were exhibited.

During the evening the President, Mr. E. R. Sutton, F.R.I.B.A., commented on the improvement of the designs submitted during the past twelve months, and said it appeared to be a custom for the retiring President to offer a students' prize, and this he would be very pleased to do. He offered a prize of two guineas for the best designs for "A Georgian House," to cost about £1,500; and if more than six designs were submitted he would give a second prize of one guinea.

Mr. Woollatt, hon. secretary of the Designing Club, on behalf of the students, accepted the President's offer. The Vice-President, Mr. H. Gill, seconded the vote of thanks.

The President then distributed the prizes as follows: Mr. N. H. Pratt, two prizes, and Mr. D. E. Knight, one prize.

LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.

A meeting of the above society was held on March 19 at the Leeds Institute, Cookridge Street, when Mr. A. E. Kirk, A.R.I.B.A. (the President) occupied the chair and Mr. Wm. Milburn, A.R.I.B.A., of Newcastle, gave a lecture on "Modern Hospitals," with lantern illustrations.

Mr. Milburn opened his remarks with a few comparisons of modern English hospitals, followed by examples of many continental types of hospitals, more particularly those of Germany. Attention was drawn to the extensive grounds and their laying out, also to the more open distribution of the various departments. In Germany the combination of infectious diseases and surgical and medical departments under one institution was noticeable, also the absence of out-patients' departments.

A few American examples of hospitals were in great contrast to those of Germany, being seven and eight storeys in height.

Dr. Eddison proposed, and Mr. S. D. Kitson seconded, a vote of thanks to the lecturer.

LONDON BUILDING TRADES DISPUTE.

The Case for the Employers.

A pamphlet in which the case for the London Master Builders' Association is clearly stated has been issued from the Association offices, Koh-i-Noor House, Kingsway, W.C. The following extracts retain the chief points:

"It has been freely stated that the London Master Builders are out to smash the trades unions. This statement is not only false, but quite obviously false. The London Master Builders are 'out' *to secure the honest observance of trade agreements*, and that policy instead of smashing trade unions would strengthen them, because no organisation, political, religious, commercial, or social, can stand on the basis of the violation of agreements.

"It is extraordinary that in these days it should be necessary to fight for such an elementary principle of common honesty.

"About a year ago the various unions in the building trade of London presented a demand for an advance in wages. This demand was courteously received and considered, and (although no one in the trade can remember an advance of more than ½d. per hour ever being made before) the employers conceded in many cases 1d. per hour (equal to a rise of 10 per cent.) and in other cases ½d. per hour; and new working rules were agreed and after submission to a ballot of the workmen signed accordingly by the representatives of the Employers' Association and the trades unions.

"Amongst other matters, these signed agreements provided that no strike should take place without reference to conciliation boards, and that no workman should be placed under any disability whether he belonged to a trade union or not.

"The increased wages had scarcely come into force before a series of 'Lightning strikes' (*i.e.*, strikes without any notice) began on various contracts throughout London against the employment of non-union workmen. A system was deliberately inaugurated under which on certain selected contracts a workman was appointed on a certain day to require the production of a trade union ticket from every other workman in every trade employed on the contract (whether such workmen were employed by the master builder or by any sub-contractor who had been appointed without the control or consent of the master builder). Whether this system was instigated by the joint action of the trades unions, or by an organisation known as the London Building Industries Federation is not certainly known, but it is supposed to be the work of the latter body.

"Under this system, if any workman did not produce a trade union ticket, the job was 'struck' without notice, all trades refusing to work unless the unfortunate men who did not produce a union ticket were discharged forthwith by the contractor. Moreover, the contractor's premises were selected, without his consent or permission, as the scene of this examination, and he was expected to act as the coercive agent of the trades unions by making trades union membership a preliminary condition of employment on his works.

"Within a short space of time no less than twenty contracts were struck in this manner, and master builders were in the intolerable position of not knowing from day to day whether their contracts would be thus abruptly stopped and disorganised.

"In no case did the trade union officials make any effectual attempts to terminate the violation of the agreements by inducing the strikers to return to work or by sending other men to take their places.

"In the vain endeavour to induce loyalty to the trade agreements, the master builders took one—typical—case before the appointed Conciliation Board. This board was unable to arrive at a decision, although the breach of agreement was as plain as the sun in the sky, and the matter was consequently referred to the Board of Trade, who appointed Sir Ernest Hatch as conciliator. He decided that the strike was a breach of the rules. Did the men return to work? Nothing of the kind, for the trade union took no more notice of this award than they did of their own signed agreement.

"The London Master Builders' Association endured this provocation and violation of agreements patiently, still paying the increased rate of wages until no less than twenty contracts had been struck, when the time came that they could endure it no longer, and they demanded from the trades unions some effectual guarantee that in future the trade agreements should not be violated.

"No such guarantee was forthcoming, and it was only after failing to secure it collectively that the London Master Builders cancelled the violated agreements, and decided to obtain an individual guarantee. They posted on their works a summary of the situation, giving notice that after a certain date no workman would be employed who would not give a written undertaking, under a penalty to work peacefully with his fellow-workmen whether trade unionist or not.

"(The employers have no desire to permanently adopt the principle of individual guarantee; it was only adopted when collective guarantee was withheld, and could be dispensed with so soon as a collective guarantee was forthcoming.)

"The London Master Builders' Association having endured for months the open, deliberate, and persistent violation of signed trade agreements, now require from the trades unions some effectual guarantee that the agreements, if reinstated, shall be loyally observed by both parties. They have suggested that this guarantee should take the form of a monetary deposit of, say, £500 from each side in each trade, to be placed with trustees, and an arbitration board should be constituted, with power to award penalty for breach of agreement out of such deposited funds, the party in default to repay to the trustees the amount of such award, so that the deposited sum should always remain intact. It should be unnecessary to add that the Master Builders do not want their workmen's money. They only want their men to 'play the game,' and play it fairly.

"The employers are not wedded to this particular method of guarantee, but would be willing to adopt any other method, provided it was effectual and reliable.

"The trades unions have offered other suggestions, but they are obviously ineffectual. They have offered their assurance that agreements shall be kept, but the employers had that assurance long ago when their officials signed the violated rules. When a rope has been used, and has repeatedly broken, anyone who used the same rope again for the same purpose would be condemned.

"The trades unions have suggested that any workman breaking the rules sh be dealt with by his own trade u executive, but this could have been d and should have been done, when the strike occurred. Why was it not d and what security have the employers it ever would be done if for twenty t it has failed?

"It has been suggested that a mone guarantee is degrading to the tr unions. Is it likely that the Lo Master Builders would voluntarily to degrade themselves? Yet they pro to place themselves in identically the position as the trades unions—to de their own money on exactly the same t and conditions as the trades unions.

"If the Master Builders, who have violated their agreements, are willin back their word with their money, degrading to trades unions, who have sistently violated their agreements, t the same?

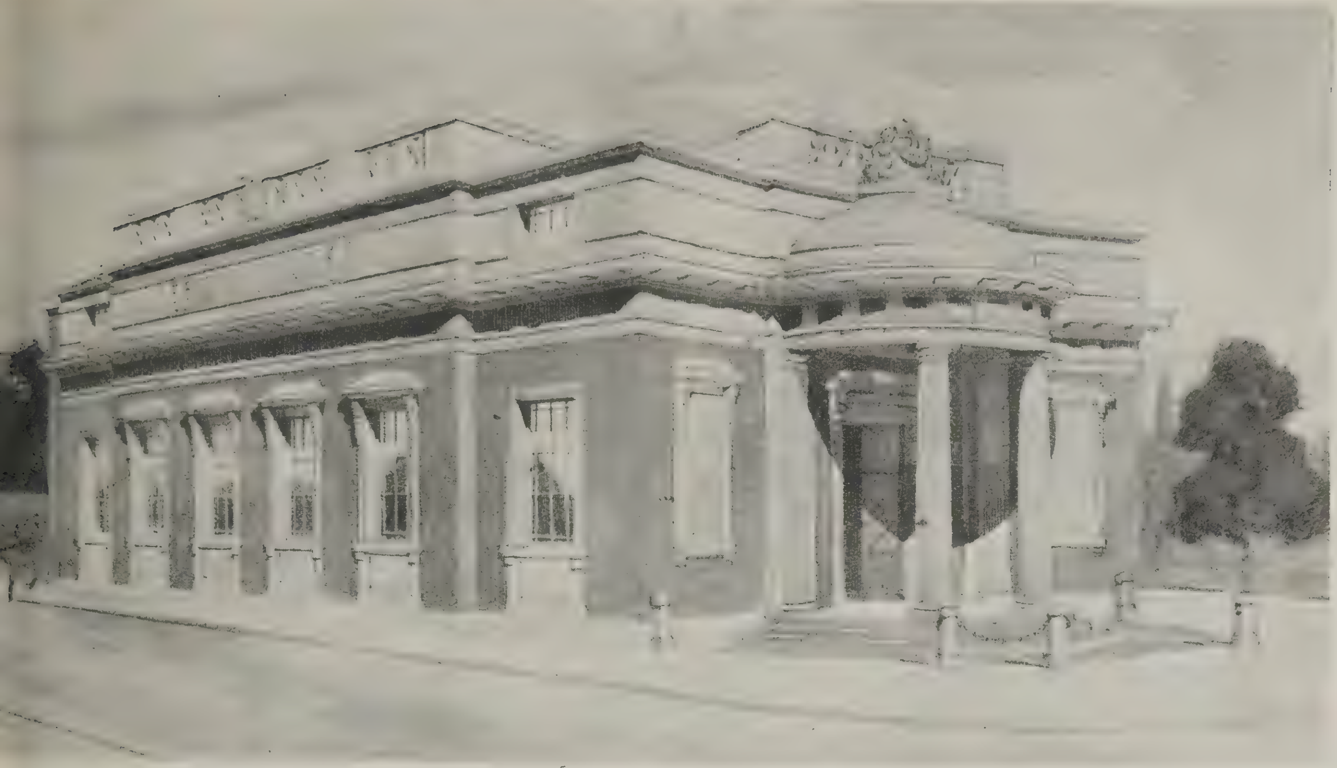
"This talk of monetary guara being degrading, either individuall collectively, is all pure nonsense; Master Builders have monetary pen attached to practically all their bui contracts, and in the highest comme circles it is accepted as an ordinary stipulation. Moreover, a monetary antee has been adopted by unions in trades for some time past."

CHARING CROSS AND HAMPST RAILWAY EXTENSION.

The work of connecting the Ch Cross and Hampstead Railway wit District and Bakerloo lines at the bankment Station is now nearly comp The extension takes the form of a loop line, about half a mile long, w commencing at the original terminus top of Villiers Street, runs underneat length of that thoroughfare as far as Terrace, where it diverges to the lef scribing a wide circle beneath the Em ment Gardens and the bed of the Th and returning on the west through station constructed below the District way about a hundred yards east c Bakerloo line. The work has taken two years and a half. The task engineers was an exceedingly difficu owing to the tunnel having to be largely through water-bearing strata. method of tunnelling adopted was known as the Greathead shield syste

The buildings of the District Ra station at Charing Cross have been e reconstructed. The Villiers Stree Embankment fronts are faced with Portland stone, and the booking hall mounted by a large glazed dome. tional entrances and exits have been on the north and east, the latter bein passage through which the public wil a right of way, and which supersed older passage which was formerly west. From the booking hall short of stairs lead down to the District forms, adjacent to other short sta leading down to a circulating area, is the upper landing for four escalato viding access with the two lower st of the Hampstead Railway and the loo line. The stations of the Ham and Bakerloo Railways are connecte passage between the lower landings escalators. By the new arranger passengers on the Hampstead Railw siring to transfer to the District or loo lines will be saved (the walk Villiers Street.

The new end-to-end journey o Hampstead Railway—from Golder's



NEW PUBLIC LIBRARY, STAFFORD. BRIGGS, WOLSTENHOLME, AND THORNELY, FF.R.I.B.A., ARCHITECTS.

:haring Cross (Embankment)—will
oy $19\frac{1}{2}$ minutes, and passengers arriv-
it the new southern terminus will be
to continue their journey east, west, or
without delay. Highgate and
pstead will be linked up with Wimble-
Hounslow, West Ham, and Barking
ne first time, and among the other im-
nt connections effected may be men-
d that between Waterloo and Euston,
minutes' run.

IN PARLIAMENT.

y Our Press Gallery Representative.)

Kensington Palace.

. Wedgwood Benn has informed Cap-
Murray that the out-building in Ken-
on Palace, in which formerly were
ed the old Roman boat and other
es of interest belonging to the Lon-
Museum collection, has been set apart
se as a much-needed store. He pro-
l that the First Commissioner would
consideration to the suggestion that
ountains in the Dutch Garden, Ken-
on Palace, should play more fre-
tly. It had been the practice that the
ains should play from Easter until the
of September daily from ten to five.

Hampton Court.

other suggestion made by Captain
ay was that in order to enable the
c to see into Hampton Court Park
o make more attractive the stretch of
from Kingston to the Palace, the wall
side the road on the north side of the
should be demolished and an iron
g substituted.

. Wedgwood Benn agreed that the
ovement was very desirable, but there
no money available for it at present.
romised to find out how much the
would cost.

South Kensington Museum.

. Wedgwood Benn stated that a new
ne was now being prepared for erecting the new spirit museum as part of the western extension of the South Kensington Museum, the original proposal having been abandoned.

London Building Trades Dispute.

Mr. Peto asked the President of the Board of Trade whether he proposed to take any steps to make it possible to carry out building contracts in London by appointing some tribunal with power to enforce the honest observance of agreements entered into between employers and trade unions.

Mr. Burns said the Board of Trade had no authority to appoint a tribunal with the powers suggested in the question. He understood that a means of securing the observance of agreements was one of the objects of the negotiations now proceeding.

Cost of Labourers' Cottages.

Mr. Lane-Fox asked the President of the Board of Agriculture whether the Board was still advised that satisfactory cottages with three bedrooms for labourers could be erected at the cost of £300 the pair in the North of England, such cost including cost of drainage, water supply, fencing, cartage, and levelling; whether his Department had had occasion to build any such cottages on Crown lands or elsewhere in the North of England, and, if so, at what cost.

Mr. Runciman replied that he appointed a Committee last autumn to advise the Board and the Commissioners of Woods on matters relating to the cost and planning of cottages for agricultural labourers. Much useful information had been already collected, including particulars of satisfactory cottages built recently at a cost of £117 each, exclusive of drainage and other incidental expenses. The total cost must, of course, vary to some extent according to the locality and other circumstances. He understood that the question of issuing an interim report with plans was now under consideration. The Commissioners of Woods had not hitherto built any cottages in the North for £300 the pair.

BOOK NOTICES.

Glasgow Cathedral.

Another interesting addition to Messrs. Bell's Cathedral Series is a monograph on Glasgow Cathedral, concerning which the author happily quotes from Scott: "Ah! it's a brave kirk—nane o' yere whigmaleeries and curliewurlies and opensteek hems about it—a' solid, weel-jointed masonwark that will stand as lang as the warld, keep hands and gunpowther aff it." Glasgow's first cathedral was dedicated in 1136, of course in the pure Norman style. No fragment of it remains, but the western section of the south aisle of the present crypt is of early date, and was no doubt influenced by the original work. The central tower of the cathedral rises square at the crossing and is without buttresses. Its date is not documented, but its details indicate the end of the fourteenth century. The spire rises to about 220 ft. above the level of the nave floor, and is octagonal in plan, with a large projecting head on each angle, and is divided into three stages in the height by sculptured and traceried bands. Four tiers of lunettes, decorated with well-designed geometric tracery, and the tall semi-detached pinnacles which surmount the broaches from the square to the octagon, assist the general impression of design that is interesting as well as original. Although, in interior measurement, the cathedral is only 282 ft. 6 in. long, its fine proportions suggest great length and convey a sense of superb dignity. The nave, which was begun by Bishop Malvoisin (1200-1203), is 123 ft. long by 61 ft. 10 in. broad at the west end, and 62 ft. 8 in. at the east; the central aisle is 25 ft. 4 in. wide, the distance between the piers of the main arcade (which are 4 ft. 9 in. in diameter) being 15 ft. 6 in. from centre to centre. It is believed that the transept is unique in Britain, seeing that the gables do not project beyond the walls of the side aisles, and the crypt, under the choir, built by Bishop de Bondington (1233-58), is esteemed for its beauty of design as "the greatest art treasure of the mediæval period in Scotland." Its area is almost identical with that of the nave as given above. Altogether, the cathedral is one of the most interesting buildings in Scotland—a fact that is well brought out in the photographic illustrations as well as in the carefully written text of this excellent monograph.

"The Cathedral Church of Glasgow: A Description of its Fabric and a Brief History of the Archiepiscopal See." By P. Macgregor Chalmers. With 40 illustrations, pages xii. + 100, 7½ ins. by 5¼ ins, price 1s. 6d. net. London: G. Bell & Sons, Ltd.

Messrs. Batsford will publish on April 23 Mr. A. E. Richardson's folio volume entitled "Monumental Classic Architecture in Great Britain and Ireland during the Eighteenth and Nineteenth Centuries." The purpose of this book is to direct attention to the monumental qualities and academic aspect of English Neo-Classic architecture, which, from the period of its inception, at the beginning of the seventeenth century, until a comparatively recent date, shows a record of continuous development. It is profusely illustrated by examples from all parts of the kingdom.

TRADE AND CRAFT.

Fire Protection at Sea.

It is remarkable that practically no adequate precautions have yet been taken to safeguard life from fire at sea. All ships are equipped with fire-fighting appliances of one sort or another, but the comparative uselessness of hose, fire-buckets, and pumps is obvious, when it is considered that ship fires are usually not discovered, and consequently not dealt with, until they have assumed dangerous dimensions. Ordinary fire precautions are not sufficient, because they rely on human observation, and are only brought into operation when the fire has become evident—and therefore dangerous. Absolute safety in this respect demands the use of extinguishing apparatus which is automatic and immediate in action.

Such apparatus, in the form of the "Grinnell" automatic sprinkler and fire alarm, has been in successful and extensive use on land for a number of years, and there seems to be no good reason why it should not be similarly employed at sea. The "Grinnell" system consists of a carefully designed arrangement of water piping attached to the roofs or ceilings of the parts protected, and at distances of 6 ft. to 10 ft. apart are attached the sprinklers. A sprinkler really is a tap or valve which is kept closed by means of a support or strut consisting of three pieces of metal fastened together with a solder that will fuse at a low temperature. The pipes are kept charged with water under pressure (on board ship one of the fire pumps would be used for this duty) and, in the event of a fire, the heat quickly raises the temperature in the vicinity of one or more sprinklers and consequently fuses the solder and releases the water, which is directed on to a serrated disc or deflector, fixed at the bottom of the sprinkler, and is at once broken up into a heavy shower under which no fire can possibly exist. At the same time an alarm is sounded which, being actuated by the water in the installation, is instantaneous and continuous.

Daylight Illumination.

The problem of the natural illumination of interiors is one of the most difficult with which the architect has to contend; but, with the introduction of patent devices, its difficulty has been considerably modified. One of such devices is Pilkington's "Prismatic" glass, the prisms of which are scientifically arranged on one side of the glass only, so that every ray of light available is diverted horizontally, an even and natural illumination thus being secured. "Prismatic" glass is made in three angles to meet different angles of light, and is obtainable in all sizes up to 100 in. wide by 60 in. high. Full particulars of this glass are given in a pamphlet issued by Messrs. Pilkington under the title "More Daylight for Dim Interiors."

Grates for Public School.

Kinlochleven Public School, Argyllshire, is being supplied with Shorland's warm-air ventilating patent Manchester grates by Messrs. E. H. Shorland and Brother, Ltd.

Acquisition of Varnish Works.

In order to cope with the expansion of their varnish trade Messrs. Aspinall's Enamel, Ltd., have purchased an old-established varnish works in the Bath Road, Mitcham.

"The Charm of Lynn."

Under the above title a series of five attractive folding circulars is being issued by Messrs. Kerner-Greenwood and Co., the proprietors of "Pudlo." The first contains delightful photographic illustrations of St. Margaret's Church and of the South Gate from the Moat, King's Lynn. Brief descriptive notes are published in the text, together with matter relating to the character and uses of "Pudlo." Copies will be sent to architects on request.

We have received from Messrs. Kerner-Greenwood and Co. a large blotter containing useful information with regard to "Pudlo," the powder which makes cement waterproof. Until the issue is exhausted Messrs. Kerner-Greenwood will be pleased to send this blotter to any architect who has not received one.

Waterproofing on the Underground.

The Ironite Co., Ltd., have just completed the difficult work of waterproofing two vertical concrete walls at the bottom entrance of one of the escalators leading to the new station of the Charing Cross and Hampstead Tube. The walls, about 6 ft. thick, are subject to about 20 lb. water pressure. The water was percolating through the whole face of the wall; but it has now been completely stopped with Ironite. The work was carried out to the order of Messrs. John Mowlem and Co., Ltd., and Mr. Harley H. Dalrymple Hay, M.Inst.C.E., the consulting engineer. The roof and walls of the station have also been treated with Ironite preparatory to painting in the ordinary way.

The New Joint Station, Aberdeen.

A correspondent sends us a report on the new joint station at Aberdeen, which states that the main portion of the structure is nearing completion. The structural ironwork of the main is completed with the exception of the glazing, which is to be commenced immediately. The new booking hall in Station Square is almost ready for passenger traffic, and the only portion yet to be proceeded with is the cab-yard. It is expected that the station will be completely finished in all the passenger departments by July. The cost of the passenger station is over £400,000, while the various extensions and improvements being carried out by the different railway companies who run into the joint station is estimated at another £400,000, making a total expenditure of £800,000 in all.

SPECIAL LEGAL REPORT

Notice Under the London Building Ac Form and Custom.

Jones and Curtis v. Barlow and Rob

March 25. Chancery Division. Before Mr Ju Sargant.

This action turned on a question of s ing building owners notice under the l don Building Act, 1894, in respect of w was said to be a party wall.

The plaintiffs were Richard Hugh J and Louisa Curtis, spinster, who s Messrs. Barlow and Roberts, buil owners, who were excavating on the o site side of rear walls to 21, King St Tower Hill, a corner dairyman's shop premises, of which plaintiffs were ow and occupiers—premises said to be years old.

Mr. Romer, K.C., appeared for plaintiffs, and Mr. Grant, K.C., for the fendants.

Mr. Romer said that the action necessitated because the defendants proceeding with building in disregar the provisions of the London Building

This matter came before the Judge motion, when his Lordship suggeste course by which the defendants could themselves in order by service of noti notices were served, and the question which they failed to agree was as to should pay costs. He must call evid to show the course of negotiation. T was a unique element in a counterc for costs. If that was to be permi they must enter a counterclaim to counterclaim, for the costs of that cou claim. If he read the defence aright of it was that there is a custom in building trade to ignore the London B ing Act. If there were such a custor should have to submit it was not a custom. On the motion the defend alleged that when they bought from L.C.C., who had acquired with the o of pulling down, the site of an ext wall was conveyed to them. There w question as to whether two different tions were party walls, and no n under the London Building Act was or ally served in respect of these. A me took place when excavation had gone up to the side wall and within ten of the back wall and at a lower level. was in direct contravention of Sectio of the London Building Act; which vided for two months' notice when exc tions were to come within 10 ft. and lower level.

His Lordship said if he had had to s the whole matter he should have said defendants should pay part of the plain costs; the proportion only was in ques

Eventually his Lordship saw couns his private room, and on their retur court, Mr. Romer notified that both pa were willing to accept his Lordship's gestion, and the rider would be that fendants paid the plaintiffs one-half of taxed costs, including the costs of counterclaim.

Builder's Sale of a House: Terms of

Metherell v. Nelles.

March 30. Chancery Division. Before Mr. J Sargant.

This was an action by Mr. Ric Metherell, builder, of Enfield, ag Mrs. Nelles, of Stamford Hill, as for specific performance of a contrac buy for £1,525 a freehold villa called combe, now being completed on an e at Winchmore Hill.

Mr. Romer, K.C., and Mr. T. As

s were counsel for the plaintiff, and
Martelli, K.C., and Mr. Webster for
lefendant.

e plaintiff, Mr. Romer explained, was
ilder who had bought a plot of land at
hmore Hill and erected upon it a con-
able number of detached residences of
gh-class character, and the question
whether, in this particular house, he
complied with a clause in the agree-
as to certain completed work. He
ted that he had so complied. The de-
ant apparently pointed to a clause
h said certain work was to be carried
o the reasonable approval of herself.
purchaser was to pay the purchase
y, less £50 to be paid to a deposit
nt at the bank in their joint names,
ait there the completion of the paint-
nd other decorative work. Title was
mmence with the conveyance of the
5. The plaintiff was to do the work
e schedule—the painting to be finished
n a month of notice, for which the
was retained, and if there was delay
as to pay interest at 4 per cent. to the
of completion, save on conditions
fied, when he was to escape liability.
purchaser was to pay interest if from
other cause completion was delayed.
plaintiff, Mr. Romer went on, thought
as a reasonable man, consulting the
s of the purchasers of his houses,
he believed he had done everything
was in the schedule, and several other
s beside. Unfortunately, the lady
een round and seen other houses on
state and apparently came to the con-
n that under this contract she was
ed to have done anything that she
ht really was desirable in a house in
she proposed to live. Certain things
took her fancy in other houses she
ht she was entitled to choose for her
that—that she was not at all bound
to what appeared in the schedule.
ounterclaimed against the builder for
st on the £1,525.

. Romer eventually announced that
parties had come to terms. Mrs.
s was to pay the builder £1,400, to-
r with half the interest that had been
d by the £1,525 on deposit, and take
ouse as it stood, paying the plaintiff's

ARCHITECTS SELECTED FOR THE BOARD OF TRADE COMPETITION.

The names of the ten architects selected in the preliminary competition for the new Board of Trade offices to be erected in Whitehall are, according to an unofficial Press statement, as follows: Ashley and Winton Newman (London), Adams and Holden (London), Robert Atkinson (London), T. Edwin Cooper (London), Harris and Moodie (London), A. Horsnell (London), C. T. Armstrong (London), A. H. Brownrigg (London), Frank Simon (Liverpool), Buckland and Farmer (Birmingham).

We have been unable to obtain official confirmation of this announcement, which is therefore reproduced with reserve, but we have no reason to doubt its accuracy.

It was known some time ago that 187 sets of drawings had been submitted, but the names of the ten selected architects were not revealed. The assessors are Sir Aston Webb, Mr. Reginald Blomfield, and Mr. Ernest Newton, whose final award may be expected shortly. The authors of the ten chosen designs receive premiums of £300. The new building is to be in two blocks, which are to cost approximately £285,000 and £270,000.

COMPETITIONS.

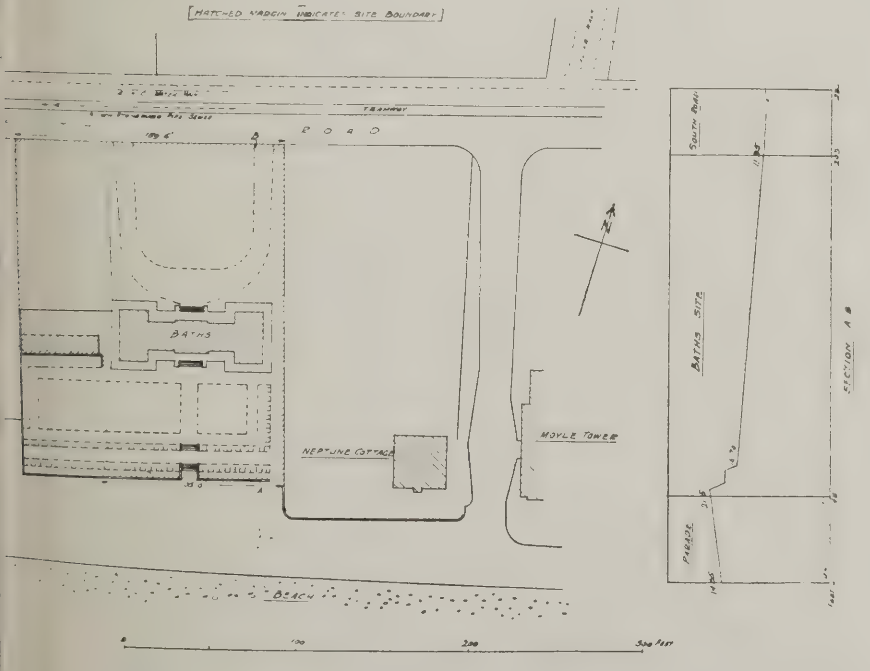
Concert Hall, Shelter, and Public Conveniences, Hythe.

Designs are invited for the above buildings to be erected at a cost not exceeding £4,000. A professional assessor will be appointed. Authors of designs placed first, second, and third will receive premiums of 50 guineas, 25 guineas, and 10 guineas respectively. Architect's commission for carrying out the work will be in accordance with the R.I.B.A. scale, any premium received to merge into the commission. Requirements: Corporation propose to erect on the baths site, having frontages to South Road and the Marine Parade, a concert hall to seat 400 and standing for 100. The existing building may be used in the design. The public shelter to be provided with a balcony on all sides for promenade, and provision must be made for tea rooms, kitchen, and stores. The shelter should have a large glass surface, so that visitors within may have as wide a sea view as possible. All floors must be connected by staircases. The concert hall to be provided with a stage, with proscenium, and dressing-room, with suitable lavatory accommodation. The floor must be level; a gallery may be provided at competitor's discretion. Two approaches must be provided for the concert hall, the principal one being from South Road, and the other from Marine Parade. Public conveniences must be provided for each sex, and should contain as a minimum a six-stall urinal and three w.c.'s for males and four w.c.'s for females. Entrances to be screened as far as practicable. Competitors must provide for the connection to the sewer in South Road of all drains, and connection for water supply. A system of heating must be provided. Lighting current will be taken from company's mains either in South Road or the Marine Parade, but all wiring and lighting, including fittings, must be provided for in the total estimate.

A typewritten report must accompany each design, giving following particulars: A description of materials proposed to be used. The system of heating, ventilation, and other mechanism to be adopted. Schedule of cubic contents, the available floor area for public use, and seating accommodation in concert hall and shelter. Separate estimates (*a*) for concert hall, (*b*) for shelter, (*c*) for public conveniences, kitchen, and stores, (*d*) for the approaches. Estimates are not to include any furniture or movable fittings, but pay-boxes and turnstiles are to be included.

Drawings Required.—The following to a scale of 8 ft. to 1 in.: (*a*) Plan of each floor of each building. (*b*) Two external elevations of each building. (*c*) One section of each building. (*d*) Block plan showing the approaches to 1-16th scale. (*e*) No perspective to be submitted.

All questions to be received by the Town Clerk, Hythe, on or before April 25, to whom designs must be delivered not later than May 30, 1914.



CONCERT HALL, ETC., COMPETITION, HYTHE: SITE PLAN.

Clock Tower, Brighton.

Sixty designs were submitted in the competition for a clock tower to be erected in Queen's Park, Brighton. The design by Mr. Llewellyn E. Williams, A.R.I.B.A., of London, E.C., has been accepted, and that by Mr. Charles H. Rose, A.R.I.B.A., of Wimbledon, placed second in order of merit. Six designs have been selected for exhibition at the Town Hall during the present week.

Housing at Blackley, Manchester.

The Sanitary Committee of the Manchester Corporation having been denied the authority to obtain competitive plans for fifty semi-detached cottages suitable for erection on the Blackley estate, have resolved (subject to the City Council's approval) that designs be invited by public advertisement from architects for two pairs of semi-detached cottages, to be constructed of either brickwork or concrete, to let at a rental of 5s. 6d. and 7s. 6d. per week respectively, suitable for erection on the Blackley estate, and that prizes be offered as follows, viz., £50 for the best and £25 for the second-best designs, each design to be accompanied by a specification and estimate of the cost, the prizes to be withheld unless a bona-fide tender can be obtained for the carrying out of the work at a cost within 10 per cent. of the architect's estimate.

PROJECTED NEW WORKS.

Church, Bentley.

A new church, to accommodate 600 persons, is to be erected at Bentley.

Factory, Elland.

Plans have been approved by the Elland Urban Council for a new woollen factory at Spa Well, Elland.

Town Planning, Chesterfield.

Chesterfield Corporation propose to adopt a town planning scheme at a cost of £2,788.

Town Planning Scheme, Scarborough.

Scarborough Town Council have approved, in principle, an extensive housing and town-planning scheme.

Bridge, Gorseinon.

At Gorseinon, a Local Government Board inquiry has been held respecting an application of the Swansea R.D.C. for powers to borrow £1,000 to build a bridge across the river Llur.

Church, Golder's Green.

Designs by Mr. Herbert Wills for a permanent church, to cost £8,000, in the London Diocesan Home Mission district of St. Alban's, Golder's Green, have been approved.

Catholic Church, Linthwaite (Yorks).

A new Catholic church is to be erected in Commercial Street, Linthwaite, close to the Slaithwaite boundary. It will have seating accommodation for two hundred persons.

Chapel, Chesham (Herts).

Plans have been passed for new school buildings for Townsfield Baptist Chapel, Chesham. The new building is to be erected upon a portion of what was the Chesham Generals football meadow.

Paving and Street-Widening, Coventry.

Coventry Corporation have applied to borrow £6,110 for paving footpaths, and sums amounting to £515 for the widening of Narrow Lane, Beechwood Avenue, and Stoke Row, and the L.G.B. enquiry was held last week.

Baths, Winchester.

A Local Government Board enquiry has been held at Winchester into the Town Council's application to borrow £2,600 for the erection of slipper baths—nine baths for men, eight for women, and caretakers' quarters.

Theatre, Torquay.

The erection of a new theatre by a syndicate of which Mr. James Glover is head is to be undertaken at Torquay. A sum approaching £50,000 is to be spent in acquiring a site near the Strand and in erecting a theatre, a large café, and nine or ten shops.

Church, Scarborough.

It is now proposed to build in the North Ward of Scarborough a church with accommodation for 600 people. Its dimensions will be 130 ft. by 100 ft., and the cost is estimated at £7,000. The designs have been prepared by Mr. Temple Moore, F.R.I.B.A.

Housing, Wilmslow.

The opening of large works at Handforth for rubber manufacture gives promise of important developments in the village and the immediate neighbourhood. Land near the centre is to be opened out for building, and more than 100 houses are to be erected.

Bank Offices, Cardiff.

Among the further improvements which are contemplated in Queen Street, Cardiff, are the erection of two, if not three, banks. The London and Provincial Bank and the National Provincial Bank have already chosen sites, and a third bank is negotiating for the purchase of a site.

Bridge, Swansea.

Swansea Parks Committee have recommended the Council to accept steelwork and masonry tenders amounting together to £4,750, for a proposed footbridge to run from Victoria Park over the Mumbles Road and two lines of railway to Swansea's foreshore.

King Edward Memorial Park.

The King Edward Memorial Committee have now completed the purchase from the corporation for £70,000 of the Shadwell Market site, which they will convert into a memorial park and public pleasure-garden for the East End. The committee are now collecting £40,000 for the laying out of the ground and the building of a river wall.

Miscellaneous Works, Golcar, Yorks.

Golcar U.D.C. have approved of the following works: Filter beds at Scarbottom Mills for Messrs. John Lockwood and Sons, Ltd.; eight houses at Rufford Street, for Mr. William Beaumont; furniture storeroom at Savile Street for Messrs. Joseph Hanson and Son; four houses in Swallow Lane for Messrs. Garside; and additions to Heath House Mills for Messrs. T. W. Thorpe, Ltd.

Buildings, Edinburgh.

Edinburgh Dean of Guild Court have granted warrants for the following: Archibald Macmillan and Co., alterations and additions at Shrub Place; Robert Maule and Son, stable, garage, etc., at Caledonian Crescent; Supreme Grand Royal Arch Chapter of Scotland, alterations at 75 and 76, Queen Street; James Watt, alterations at 24, Rothesay Terrace; Central Picture House, Portobello, picture house at corner of High Street and Hope Lane, Portobello.

Buildings, Amersham.

The Buildings Committee of Amersham R.D.C. report approval of the following plans: Two cottages, Seer Green; house, Chesham Bois; bungalow, Amersham; alterations to villa, Austen Wood; house, Heath End, Little Missenden; pair of cottages, Ashley Green; residence and garage, Amersham; house, School Lane, Chalfont St. Peter.

Library Extension, Derby.

Derby Town Council are being asked to approve plans providing for the housing of the Bemrose Library, acquired for the town by the instrumentality of Lord Curzon, and secure other improvements in the existing buildings and also effect a widening of the Wardwick thoroughfare. It is proposed to pull down the present curator's house and adjoining premises and erect an extension of the present Library and Art Gallery. The total cost of the new building will be more than £6,000.

Buildings, Wortley.

The following plans have been approved by Wortley R.D.C.: Seven houses, "The Wheel," Ecclesfield, for D. and W. Parker; cottages, offices, stabling, and stores, for J. Robinson, Ltd.: wooden bungalow, High Street, Ecclesfield, for T. Doughty; amendment of approved plans of two houses, Townend Road, Ecclesfield, for Mr. Stringer; petrol sto Wadsley Bridge, for S. Fairest; new st works, Wadsley Bridge, for Needham Co.

Buildings, Bexhill.

The following plans, amongst oth have been passed by Bexhill Buildi Committee: Detached house, Penl Road (Mr. W. Shannon); extension Mission Hall, The Down (Mr. G. Gray, on behalf of the churchwardens St. Stephen's Church); showroom at of Devonshire Road (Mr. G. H. Gray, behalf of Mrs. Eyles); extensions Women's Home, Metropolitan Conva cent Institution, Sea Road (Mr. W. Ca bell Jones, on behalf of Metropolitan C valescent Institution).

Dwellings, Cannock.

At a special meeting the Cann U.D.C. considered an important prop bearing on the vexed question of hous accommodation in the district. The C said the General Purposes Committee considered the subject, and it had been cided to build fifty houses, to advertise sites, and also to apply to architects send in plans of houses to cost £175 £200, and a premium would be given the best design. The Council, howe would not be bound to instruct the ar tect whose design should be approve supervise the work. We trust, howe that this provision is merely precaution as the architect making the design is proper person to carry it out. The re was adopted.

Improvements, Rotherham.

Rotherham Borough Council passed a series of resolutions which result in the corporation purchasing West Riding Court House and George's Hall for the widening of Col Square and Effingham Street. scheme involves the removal of the C Market to the new site in Millgate. new Court House for the West Ri Police authority is to be erected by West Riding Joint Committee on the of the present Cattle Market in the Cr £6,000 is to be paid for the Court H building and site, and the Crofts which is valued at £2,000, is to be tr ferred as an additional part of the chase consideration. The cost of George's Hall will be £6,000.

Buildings in Glasgow.

The following were among the p passed recently at Glasgow Dean of G Court: The School Board of Govan, Bath Street, to make additions to scho Langlands Road, Govan; G. Barr and Ltd., aerated water manufacturers, Great Eastern Road, to erect build there; Scottish Co-operative Whole Society, Ltd., 95, Morrison Street, to construct portion of boot factory destr by fire at Shieldhall; Wallace, Scott, Co., Ltd., 27, Cadogan Street, to ere building on ground off Minto Ave Cathcart; the Corporation of Glasgow erect five new pavilions and other b ings at Ruchill Hospital, and to m alterations and additions to police b ings in Albert Road, Govan; Frede Braby and Co., Eclipse Works, Ho Street, to make extensions and addit to works in Petershill Road and Da Street; Union Cold Storage Comp Ltd., 233, George Street, to erect build for cold storage in Armour, Hill, Sydney Streets.

Continued on page xx.

THE KAHN SYSTEM of
REINFORCED CONCRETE
THE TRUSSED CONCRETE STEEL CO., LTD.

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N.B.—The T.C.S.C. will be glad to collaborate with Architects on any construction, and place at their disposal the skill and experience of their Engineering Staff, and invite enquiries for their Handbook and Literature.

PROJECTED NEW WORKS

Continued from page 256.

London.

Subject to compliance with certain specified conditions, consent has been given by the L.C.C. to the execution of the following works:

City of London.—Two balconies, 69, King William Street, on the application of O. P. Milne.

Re-erection of a projecting shop at 35 and 37, New Bridge Street, on the application of F. Legg, on behalf of Spiers and Pond, Ltd.

Haggerston.—Iron runway at Dalston Saw Mills, 26 and 27, Regent's Row, Shoreditch, on the application of W. Warden.

Hampstead.—Additions at 3 and 4, Byron Villas, Hampstead Heath, on the application of F. Potter, on behalf of Dr. A. H. Croucher.

Kensington, South.—Bay windows and a balcony at the rear of 141, Holland Road, Kensington, on the application of Mr. F. White, on behalf of Mr. C. Kiralfy.

Lewisham.—Porch, bay windows, and sham half-timber work to proposed house on western side of Guibal Road, Lee, on the application of A. Lane, on behalf of W. H. Turle.

Bay windows, porches, hoods, and oriel windows to twelve houses on eastern side of Manwood Road, Lewisham, on the application of J. Nicholls.

Marylebone, West.—Block of flats upon the site of 8-12, Manchester Street, St. Marylebone, on the application of H. J. Colebrooke.

Norwood.—Bay windows, porches, oriel windows, and barge-boards to thirteen houses on southern side of Baytree Road and fifteen houses on northern side of Sudbourne Road, Brixton Hill, on the application of E. Evans and Sons.

Rotherhithe.—Extension of a gangway at Butler's Wharf, across public way of Shad Thames, Rotherhithe, on the application of G. Potton and Son.

St. Pancras, South.—Iron balcony at first-floor level of building on site between 72, Swinton Street, and 322, Gray's Inn Road, on the application of Ashdown and Price.

Addition at the rear of Turner's Hotel, 73-76, Guilford Street, St. Pancras, on the application of J. W. S. Burmester, on behalf of J. W. Turner.

TOWN PLANNING CONFERENCE.

At the conference of local authorities on town planning, organised by the National Housing and Town Planning Council, which was concluded at the Westminster Palace Hotel last Thursday, Alderman W. Thompson, Chairman of the National Housing and Town Planning Council, presiding, the conference continued the consideration of the Ruislip-Northwood scheme, which is now passing through its final stages, and the principal provisions of which were explained in detail by Councillor F. N. Elgood, Chairman of the Ruislip-Northwood Town Planning Committee, and Mr. E. R. Abbott, Clerk to the Urban Council of that district.

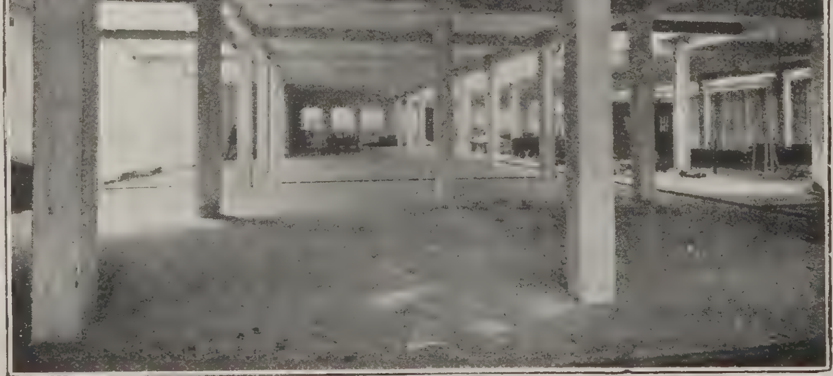
Mr. H. R. Aldridge, secretary to the conference, said it had been recognised that the best way of dealing with arterial roads was through town-planning schemes, of which they had two examples in Ruislip-Northwood and Birmingham. In connection with the former scheme it was interesting to note that in respect of any new street to be made of a greater width than 40 ft.
owner was required to bear any grea
expense in the cost of construction th
that of the width of 40 ft., the cost of t
balance of the work on 60-ft. roads bei
borne by the council. At Birmingham t
local authority had secured streets up
100 ft. in width, in connection with wh
the landowners bore the cost of constr
tion up to 60 ft., and the balance was bor
by the Council. Mr. Elgood stated that
nearly every case the landowners h
agreed to give the land up to 60 ft., l
they were not responsible for street wo
beyond 40 ft.

In the discussion which followed it w
contended on the one hand that if an ow
obtained permission to make a road on
estate, he was not bound to dedicate it
public use, and might restrict heavy traf
and in opposition to this view that the m
fact of throwing the road open to pul
traffic would establish its dedication
user, and the owner would have no con
over the traffic.

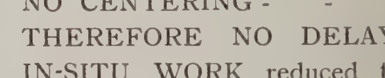
Another matter discussed related to
practice of disfiguring the country side w
advertisements. It was explained t
under the Ruislip-Northwood scheme
person was allowed to fix or use advert
ments on buildings, hoardings, or fra
work so as to interfere with the amenit
the neighbourhood. Mr. Abbott conside
this a matter of public importance.
far as his district was concerned, t
were going to put a stop to the erec
of these abominable things in the fie
They did not object to legitimate adve
ing, but they did protest against spoi
picturesque country by tempting farn
to stick up glaring and disfiguring ad
tisements.

[This difficulty has been met in Fra
by imposing a prohibitive tax.]

SIEGWART FLOOR. ERECTED WITHOUT CENTERING.



FACTORY, BIRMINGHAM.
View showing the underside of Siegwart Flooring.



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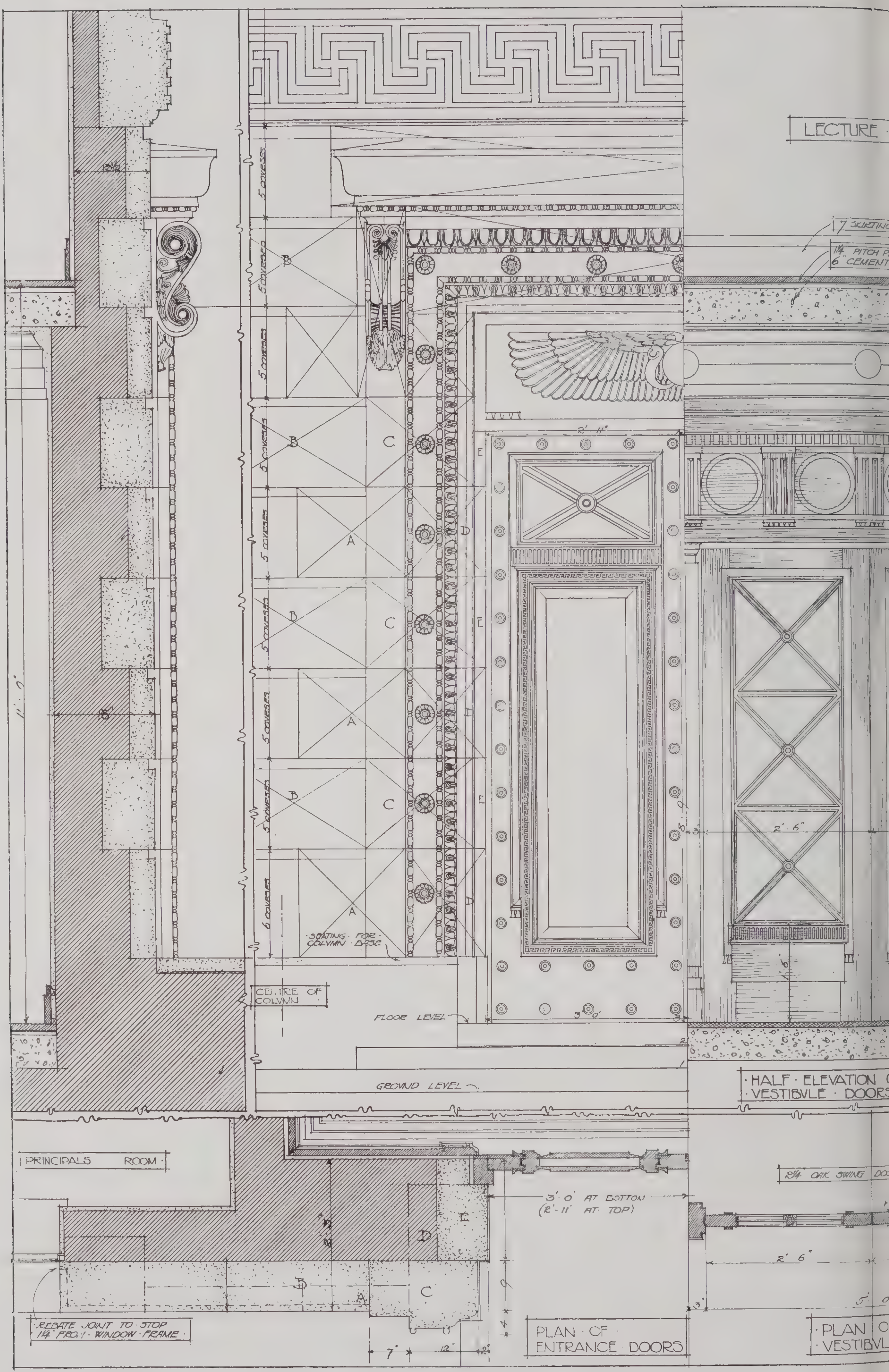
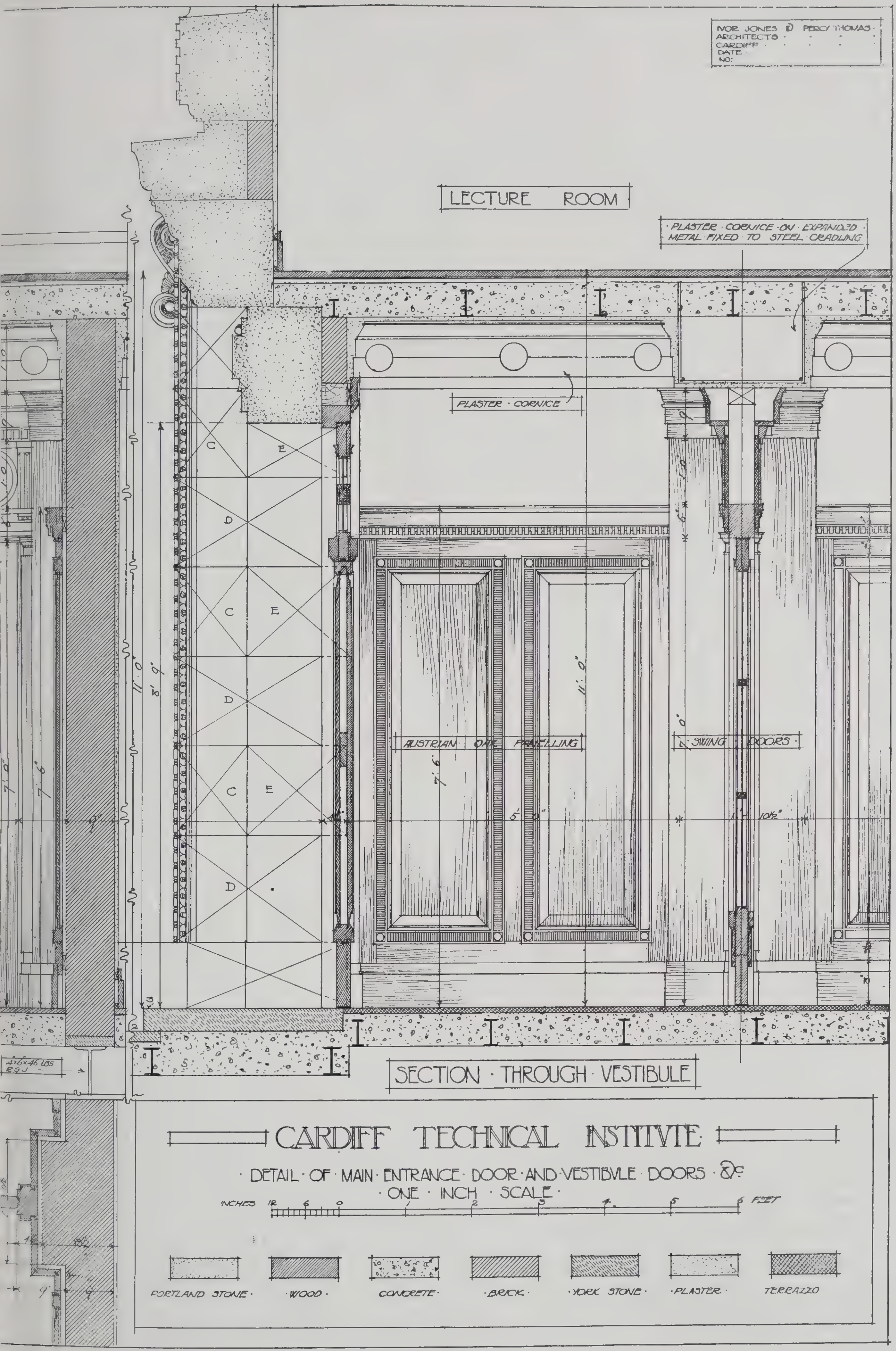


WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XX.—CA

IVOR JONES A


IVOR JONES & PERCY THOMAS · ARCHITECTS · CARDIFF · DATE · NO:
LECTURE ROOM
· PLASTER · CORNICE · ON · EXPANDED · METAL · FIXED · TO · STEEL · CRADLING ·
PLASTER · CORNICE
AUSTRIAN OAK PANELLING
SWING DOORS
11' 0"
8' 9"
7' 6"
7' 0"
9"
5' 0"
10½"
C
D
E
4×6×46 LBS R.S.J
SECTION · THROUGH · VESTIBULE
CARDIFF TECHNICAL INSTITUTE
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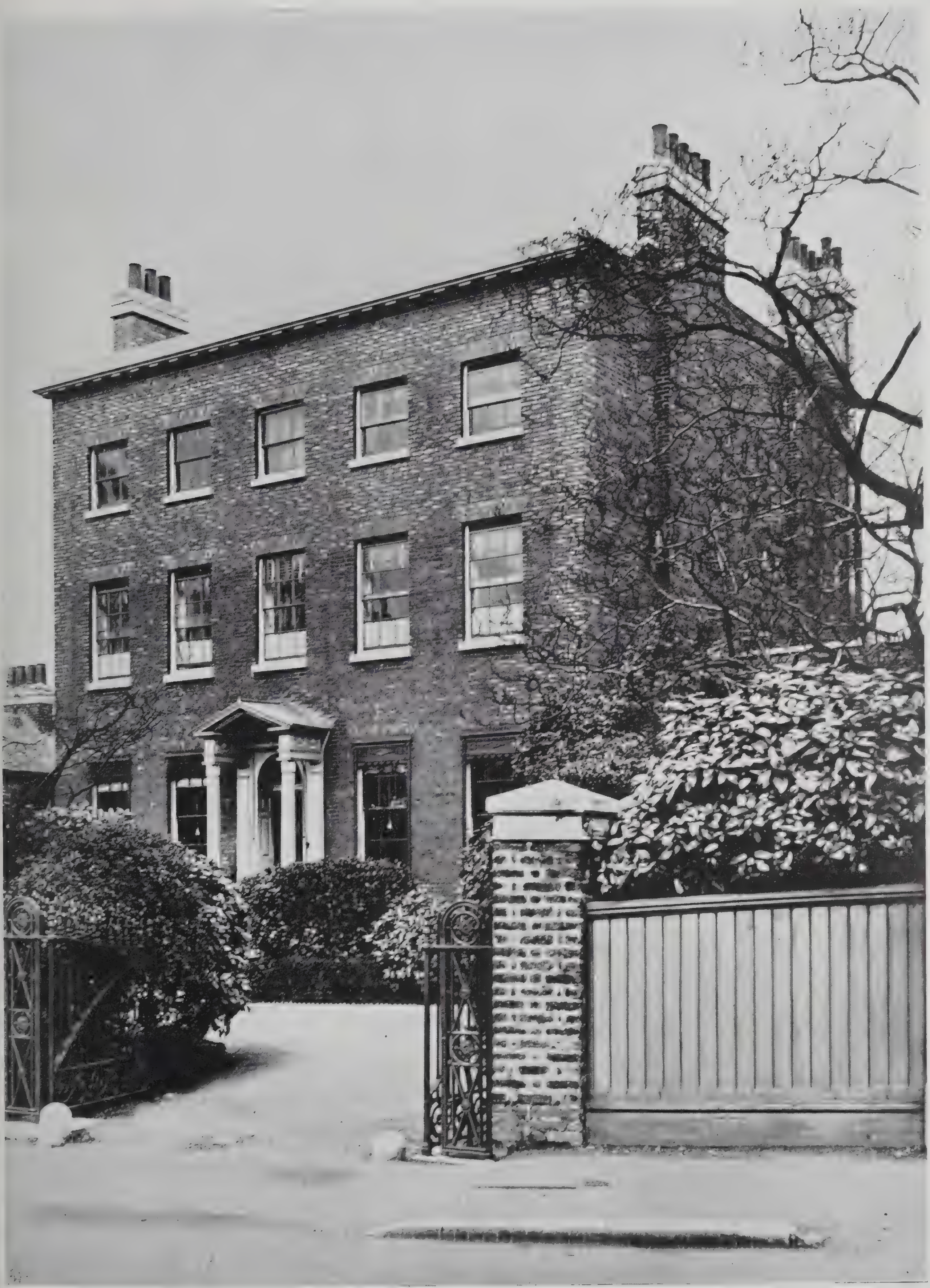
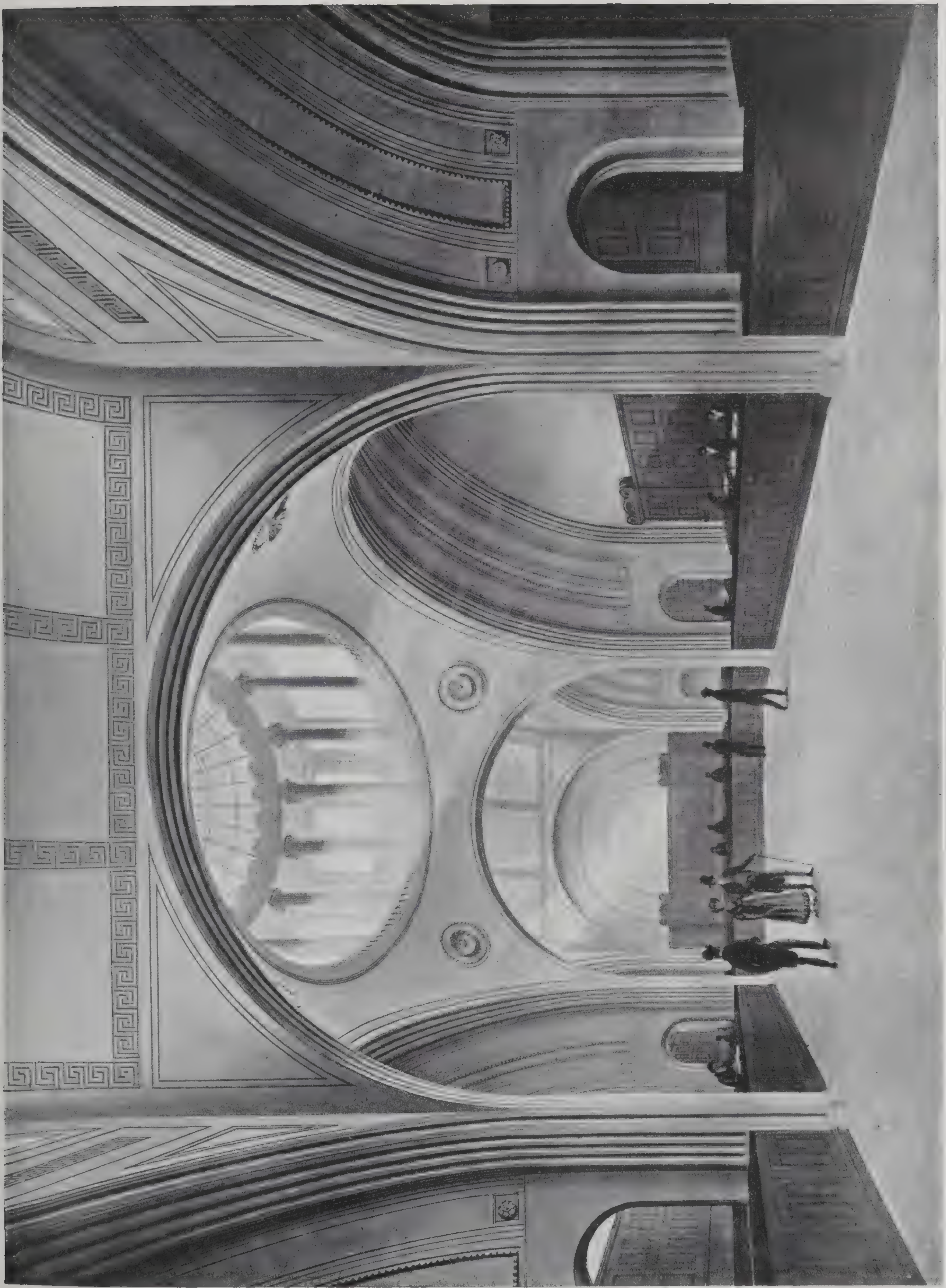
· ONE · INCH · SCALE ·
INCHES 12 6 0 1 2 3 4 5 6 FEET
PORTLAND STONE ·
· WOOD ·
CONCRETE ·
· BRICK ·
· YORK STONE ·
· PLASTER ·
TERRAZZO

L INSTITUTE: DETAILS OF MAIN ENTRANCE DOOR AND VESTIBULE DOORS, &C.

IAS, ARCHITECTS.

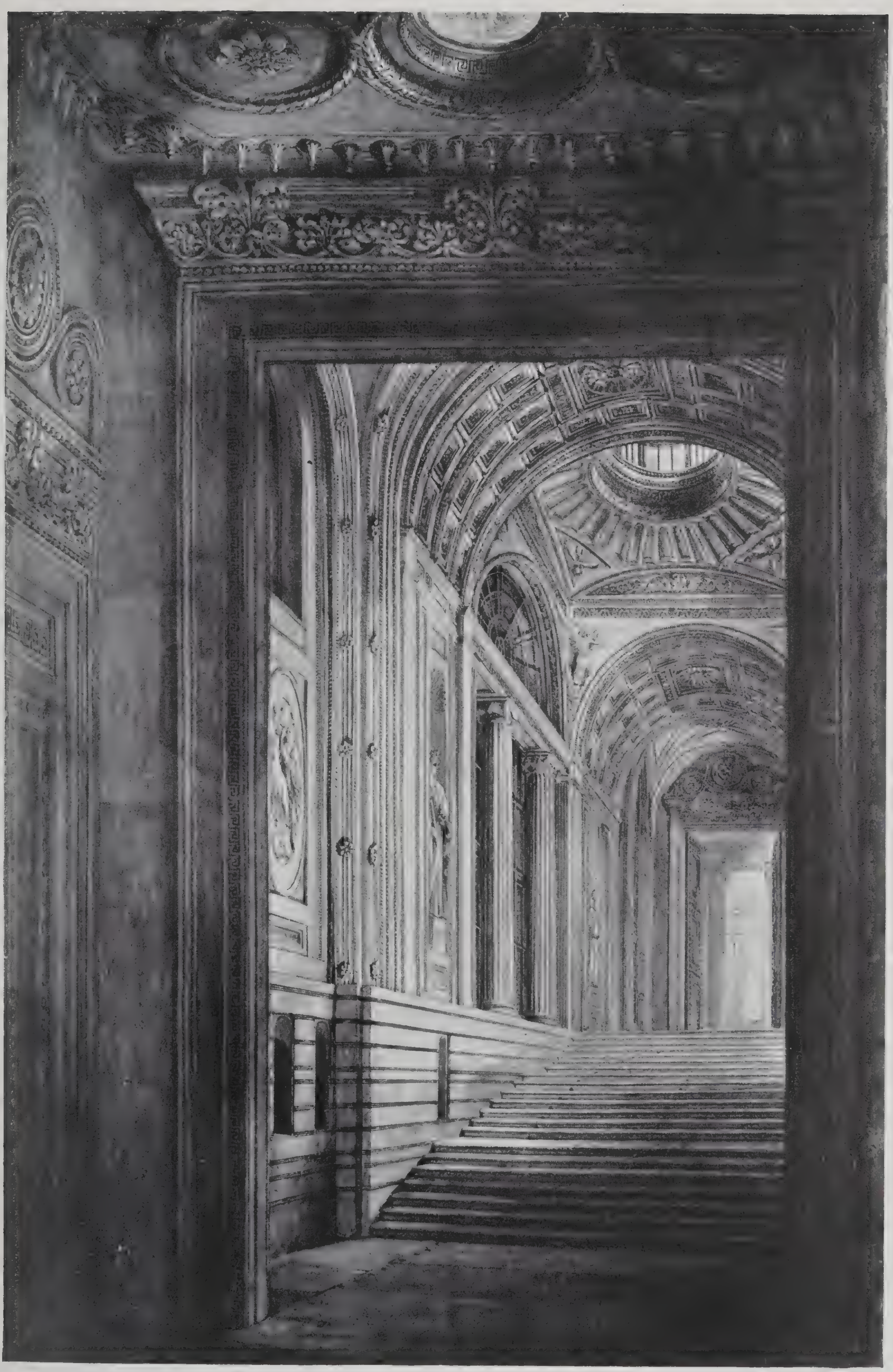


SMALL HOUSES OF THE LATE GEORGIAN PERIOD. III.—HOUSE ON CHAMPION HILL, LONDON, S.E.

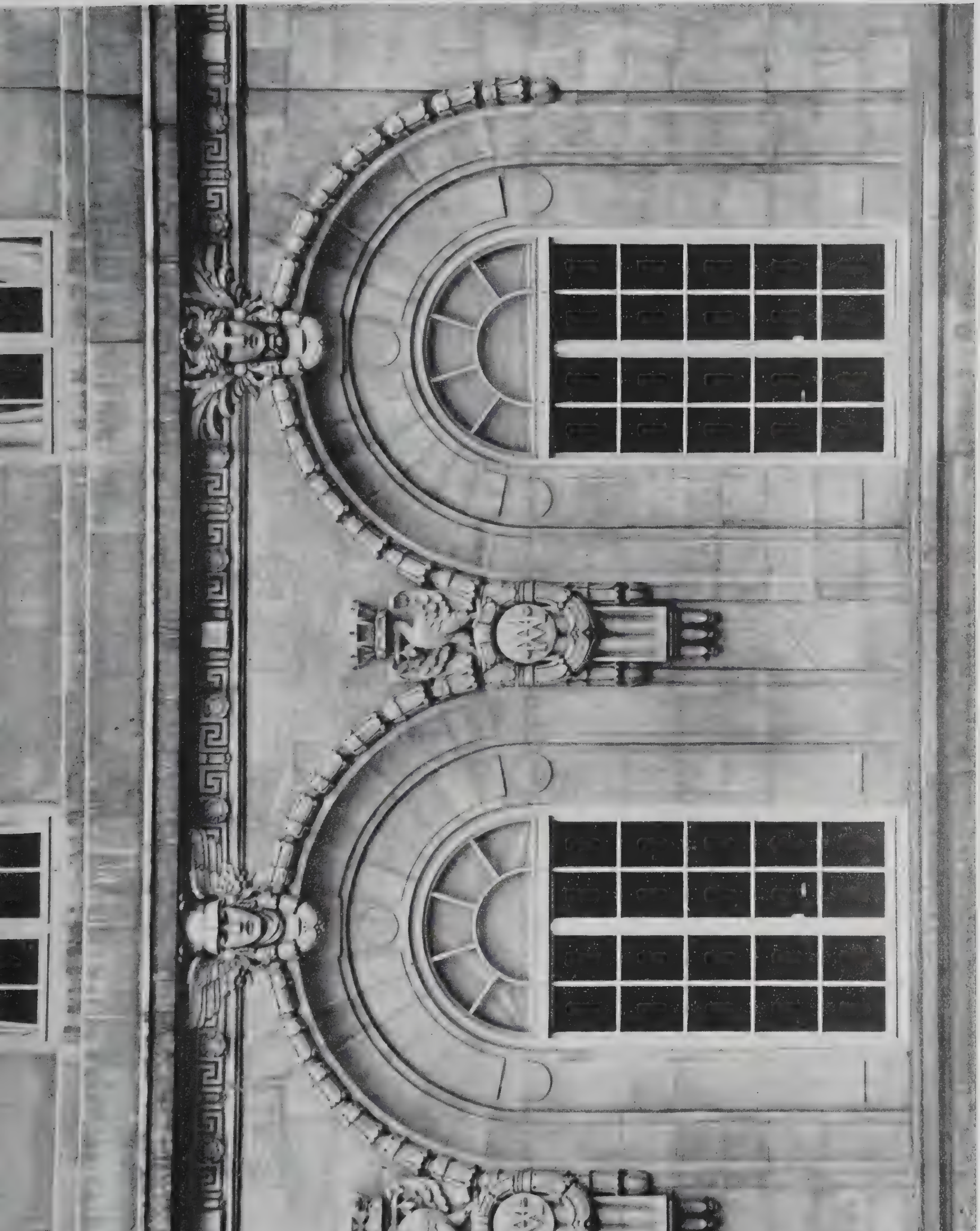


MONUMENTAL ARCHITECTURE. XIV.—BANK OF ENGLAND: STOCK OFFICE.

SIR JOHN SOANE, ARCHITECT.

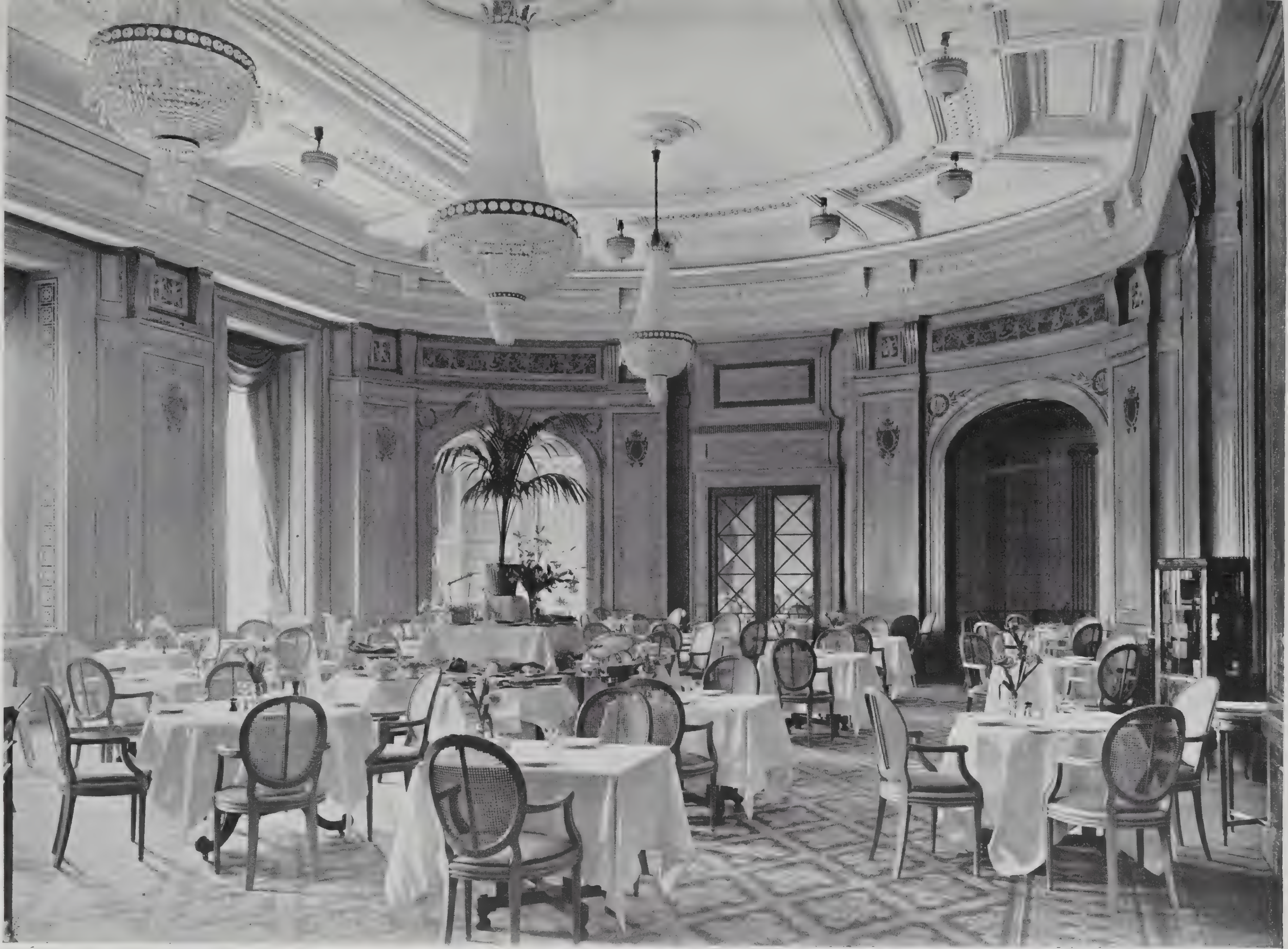


MONUMENTAL ARCHITECTURE. XV.—SCALA REGIA, HOUSE OF LORDS.
SIR JOHN SOANE, ARCHITECT.



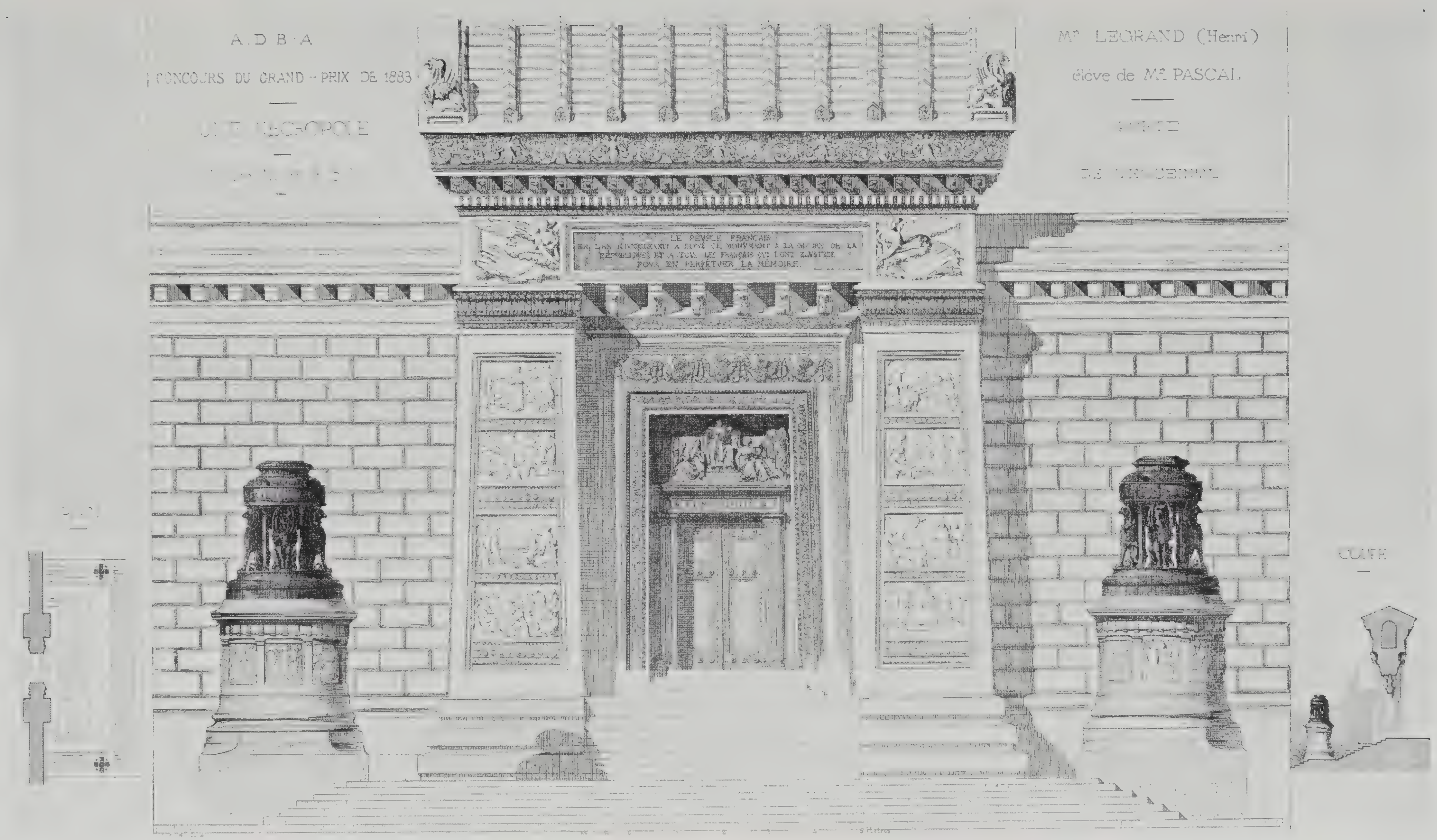
CURRENT ARCHITECTURE. LIV.—MIDLAND ADELPHI HOTEL, LIVERPOOL: DETAIL OF PRINCIPAL FAÇADE.

R FRANK ATKINSON, F.R.I.B.A., ARCHITECT.



CURRENT ARCHITECTURE. LV.—MIDLAND ADELPHI HOTEL, LIVERPOOL: FRENCH RESTAURANT.

R. FRANK ATKINSON, F.R.I.B.A., ARCHITECT.


A.D.B.A
CONCOURS DU GRAND-PRIX DE 1883
UNE NÉCROPOLE
Mr LEGRAND (Henri)
élève de Mr PASCAL
PORTE
LE PEUPLE FRANÇAIS
A ÉLEVÉ CE MONUMENT A LA GLOIRE DE LA
RÉPUBLIQUE ET A TOUS LES FRANÇAIS QUI L'ONT ILLUSTRÉE
POUR EN PERPÉTUER LA MÉMOIRE.

STUDENTS' DRAWINGS. XIV.—DESIGN FOR A NECROPOLIS.

BY M. HENRI LEGRAND.

THE

ARCHITECTS' & BUILDERS'

JOURNAL.

Wednesday, April 15, 1914. Volume XXXIX. No. 1006.

No. 80.

(From Piranesi.)

C

THE ARCHITECTS' & BUILDERS' JOURNAL.

APRIL 15, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1006.

"Religious" Architecture.

It has often been said that certain types of architecture are devoid of the "religious" quality. We are told that, while Westminster Abbey creates in us a sentiment of devotion, St. Paul's Cathedral is "cold," "Pagan," and destitute of spiritual significance. If one asks what are the grounds for this extraordinary opinion no satisfactory answer is ever forthcoming, and one is tempted to believe that the opinion is not seriously held, but is rather the expression of a desire to indulge in facile architectural criticism. The people who give utterance to this dictum appear to have no standard of judgment at all, and they are utterly at a loss to define this spiritual element which they say is present in Gothic architecture but absent from Classic. Among a certain circle it doubtless creates a favourable impression when a man declares dogmatically that a particular building is not religious in character, for it seems to indicate that he has a certain delicate intuitive sense which is denied to vulgar mortals.

Let us see whether it is possible to define some of the attributes of an ecclesiastical building, and to define them in terms not of the emotions they excite, but in terms of the actual architectural features which lead us to believe that we are in the presence of a church. Our criticism must be objective—that is, it must deal with the forms before us, and these must be capable of interpretation if they constitute a work of art. Expression rather than symbolism must be our aim here. The building must tell its own story without the aid of literary explanations. If there has been a definite agreement, accepted by the whole of society, that every church should have a steeple and should be built in the Gothic style, then our churches would become ecclesiastical symbols, but it would not follow therefrom that their purpose would have found architectural expression. The differentiation of churches from other buildings could have been achieved just as well if there had been a universal decree that every church must be covered with pink glazed tiles, and that all other structures should be denied this distinction. But nobody would dream of contending that pink glazed tiles (apart, of course, from the sacred associations that would quickly gather round them) had the innate quality of inspiring religious devotion. We must ask, then, to what extent do steeples and pointed arches, by virtue of their form alone, inspire this devotion?

It is true that a steeple makes us look upwards, but so do the tall chimney stacks of our factories. Has the Eiffel Tower a religious character because of its great height?

Long ago, when people thought the earth was flat and heaven above the sky, it was the custom for religious devotees to cast their eyes upwards in supplication. We now know that it would be just as logical to cast our eyes downwards, towards the right or the left or towards any other quarter of the universe. So the idea that the pointed arch by leading our glance upwards towards the roof of the church is in any way performing a spiritual function and aiding our devotions is quite untenable. The peculiarly sacred
racter of Gothic architecture is quite a late inven
and those who presume to call other methods of b
ing "Pagan" and irreligious have little knowledg
history. The earliest Christian basilicas had flat r
and we are not informed that these buildings
unfitted for worship. Neither have people of
religions found it necessary to employ the pointed
or vault in their temples. It cannot be too
insisted that the pointed vault is nothing else bu
engineering device to construct a roof with small st
across aisles of varying widths, and it has only
slightest connection with Christianity or any
faith; and so far from these mediæval churches b
more spiritual than those of other periods, they a
reality more materialistic, for the reason that their
was not altogether dictated by the desire of artis
create beautiful structures, but by a quite temp
engineering necessity which ceased to operate as
as men became acquainted with the grand metho
building practised by the ancient Romans.
attempt to create beauty is a spiritual activity, a
beautiful work of art is expressive of spirit.
when the artist is not master of his material,
becomes the servant of the engineer, as he d
mediæval times, then brute matter has asserted
and has not been endowed with the form which
could give it vitality. That is precisely the ch
which must be brought against Gothic architect
its lack of spirituality, its materialism.

We sometimes hear of "religious gloom," but
difficult nowadays to differentiate religious gloom
any other kind of gloom. In the mediæval ages p
were afraid of the dark because they associated it
ghosts, devils, and other evil spirits. But a
different sentiment prevails in modern times.
generally find that a sudden failure of the electric
is an occasion not for terror but for hilarity. It
conceivably have been part of a monkish devi
strike awe into their congregation by providing it
an environment of darkness and mystery. But
this is not certain, and it is probable that the smal
of the apertures in our early churches was due t
difficulty of protecting their interiors from rain
cold. As soon as glass was invented the win
grew in dimensions. The same people who a
affected by religious gloom also express enthusias
the great Gothic "lanterns," such as King's Co
Cambridge, into which a blaze of light is adm
Perhaps they would describe this as a "religious l
something different from the ordinary kind!

It is obvious that neither architecture nor any
elements that go to compose it can have what is
monly spoken of as a religious character. There
such thing as a religious steeple, a religious vault,
or window. No feature of brick or stone can
devised that it would indubitably proclaim itself
an integral part of a religious edifice, except in s
as it was intimately associated with the definite u
of the priests and worshippers belonging to a part
faith. A building can be arranged in such a ma

a special type of service can be performed therein,
his is a matter of planning and accommodation;
urch to a certain extent expresses the form of the
ce, it takes cognisance of the choir, the congrega-
and the preacher for whom a pulpit is provided,
cannot express the religious character of the ser-
The greatest blasphemy might be preached
the pulpit, but the church would still be admirably
ed for the lecturer and his audience.
ist no church have a steeple, then, and do steeples
ess nothing at all? There is no answer to these
ions unless we abolish from our minds all those
ntic fallacies that are founded upon an ignorance
e function and limitations of architecture. We
consider the broad aspects of æsthetics and of
design. Assuming, as we may, that the Christian
on plays such a part in our national life that we
to give expression to its prominence, we cannot
is better than by endowing our churches with tall
les. These steeples, apart from their individual
y, express nothing but emphasis, and the same
of emphasis that a long stroke of the pen pos-
s when placed in the company of short strokes.
e is nothing mysterious about their forms, and no
ous signification can be attached to them. But
e determination of the community to give them
rtistic emphasis, to keep its other buildings low
der that the steeples might show up to better
ntage, in this æsthetic desire, which can only be
ed by the corporate will of society, there is a world
aning.

A. T. E.

Building By-laws Inquiry.

is stated, on what appears to be trustworthy
uthority, that Mr. Herbert Samuel proposes to
ppoint a Departmental Committee to inquire into
ubject of building by-laws under the Public
h Acts. No doubt the Government's active
st in the housing and land questions is the imme-
motive for the inquiry, which, however, has a
g substantive interest in itself. If, in due course,
sults of the inquiry are published, they will reveal
ss of inconsistencies, anomalies, and absurdities
will show the need for immediate and drastic
n. But local by-laws, being mainly based upon
ls drawn up by the Local Government Board,
ly look sensible enough on paper. It is their
istration that causes all the trouble, and this is a
r with which it is incomparably more difficult to
It is no doubt the fact that by-laws have become
igorous, and are often too rigorously enforced;
he proposals to relax them, and to give local
rities larger discretionary powers as to their
cation are fraught with obvious dangers. On the
, it is better in the public interest that by-laws
d be too strict rather than too lax; but competent
onscientious inquiry should show the means of
ing both extremes, and of removing many legiti-
grievances of architects, builders, and owners.
Stork and King Log should both be placed in
st of "monarchs retired from business."

Bank and Insurance Buildings.

NKS and insurance offices make or mar the main
streets of our towns, setting the scale and influ-
encing the character of the "business premises"
ollow them, but more often dwarfing into insig-
nce those that already exist. Unfortunately it is
e nature of the case that wealthy corporations
d build pompously and lavishly as an expression
ir prosperity rather than of their taste. As the
ncial Times," in an article on "Modern Insur-
Buildings" puts it, "the strength and progress of
nce are appropriately indicated by the magni-
and architectural impressiveness of modern
," and, again, "these palatial insurance premises
are a profitable investment of profits, and an asset of the first importance, the value of which it is hard to over-estimate, for prestige is difficult to appraise in terms of money." As our readers are aware, we have often said pretty much the same thing, but always with some such reservation as that implied in the advice of Polonius: "Costly thy habit as thy purse can buy, but not exprest in fancy." It is in this respect that most of our insurance buildings, and some of our banks, fall immeasurably short of American examples in the same kind, which, while exceeding ours by an almost barbaric sumptuousness, have, nevertheless, as a rule, an architectural character that redeems them from mere ostentatious vulgarity, and, indeed, invests them with dignity and distinction. American superiority is not altogether due to better architectural training. In America they have the very sensible habit of "trusting the man who knows," whereas in this country the client nearly always feels competent to advise the architect; and meddlesome interference, whether on fiduciary or on æsthetic grounds, by a whole board of directors would partly account for the tameness of many of our business buildings as compared with those of the United States.

St. Martin-in-the-Fields.

OUTRAGES directed against noble buildings have ceased to cause much public excitement. They are accepted stoically and placidly as commonplace manifestations of organised hysteria, and, on the whole, this form of "expectant treatment" seems to promise the most effectual remedy. To take as little notice as possible of the hysterical lady, or of the hysterical "movement," is to set an almost irresistible example of sanity and decorum. What is the use of committing these stupid crimes if they fail to shock? Coming as one of a long and wearisome series, the outrage at the church of St. Martin-in-the-Fields excited no special wonder, either by its enormity or its futility, and no words need be wasted in expressing indignation at the wicked and silly attempt to destroy James Gibbs's masterpiece, to which, fortunately, but very slight damage was done by the explosion of the small powder-canister, having in it a candle which one of the lady worshippers piously lighted before leaving her pew. The church was built in 1721-6, at a cost of £36,891 10s. 4d., including £1,500 for an organ, and in its vaults is still cherished the old parish whipping-post, which might admit of a useful modern application. Among the celebrities buried in the church are Roubiliac the sculptor, and James Stuart—"Athenian" Stuart, of Stuart and Revett.

A Street-widening Trouble.

A DELICATE issue in town-planning has been decided by Sir Alfred Bray Kempe, Chancellor of the Diocese of London, on a petition by the Uxbridge Urban District Council for a faculty to acquire and lay-out a disused burial-ground. Disused since 1855, the burial-ground was thought to offer a good opportunity for street improvement. Part of it was to be converted into an open space, and a small portion was to be absorbed in a street-widening scheme. It was against this latter detail that objection was raised, and the objection was upheld because no power was given by the Open Spaces Act, 1906, to acquire portions of a burial ground for street improvement. That is an important point. and it reveals a rather disconcerting difficulty of town-planning. As the trouble is likely to recur in many other instances, there may arise, sooner or later, the consequent necessity for amending the law. Obstructive churchyards are not rare, and any attempt to deal with them is usually opposed as sacrilegious, no matter how long the burial-ground may have been disused; but the persistence of so admirable a sentiment is by no means a bad augury for town-planning. It is to be respected as a disposition which can be turned to sweet uses by those who perceive the danger of town-planning becoming a matter of ruthlessly utilitarian engineering. But the very existence of those obstructive churchyards is a proof of the need—not felt in the old days, and only realised with keenness in ours with the vast increase in road traffic—for authoritative central control of the highways. Narrow roadways with awkward corners and obtrusive features are often valued for their supposed picturesqueness; but this rather crudely Gothic idea is rapidly giving way to the rational and Classical conception of highways which was one of the boons of the Roman invasion. On a true view, nothing that is irrational and gravely inconvenient can be held to be really admirable.

Studentships in Steel Construction.

SO great has been the neglect by architects of the principles of steelwork design and construction, that one might be excused for wondering whether they are suffering from that "fear of iron" which, as noted in a recent issue, was apparently a superstition among the ancients. Structural engineering is now a separate profession; and the responsibilities involved call so obviously for special aptitude as well as for concentrated application that the architect is wise in relegating them to the expert. But this is not to say that the architect is justified in affecting a comprehensive ignorance of the subject. On the contrary, we have always held that he should make haste to learn at least enough of it to know whether or not he is being well served by the specialist whom he employs and is supposed to control. Moreover, we see no reason to recede from our repeated suggestion that the young architect who, in the course of his training and development, feels that he is better adapted for the scientific than for the artistic side of his profession, would be well advised to follow his bent and qualify as a constructional engineer or as a reinforced concrete specialist. We now note that Sir R. Rowand Anderson has offered, through the Edinburgh Architectural Association, two travelling studentships of £40 each for the encouragement of the study of steel construction, more particularly in France and Germany. Two students have been already appointed, and the results of their investigations will probably be published in book form. This is only a small beginning, but it may lead to important consequences; for it can hardly fail to hasten in some degree the development of steel construction in this country, which in this respect, as the conditions of the studentship so pointedly imply, lags far behind the Continent; and it is surely not destitute of significance for the organisers of professional education.

The Mall Approach Improvement Bill.

THE discussion which took place last week in the House of Commons, when the Mall Approach Improvement Bill was read a second time, could not be described as particularly profitable. Of all the speakers, Sir R. W. Essex alone showed concern for the architectural success of the scheme; the rest of the debate was taken up by a squabble over the respective rights of and the public spirit shown by, respectively, the Phœnix and the Liverpool and London and Globe Insurance Companies, whose premises are affected by the suggested improvements. Under the Bill the first Commissioner of Works has the power to veto unsuitable designs for the façades of the buildings on the Charing Cross side of the Admiralty Arch. Sir R. W. Essex pleaded that this was insufficient; considering the large contributions being made from public and municipal funds, the control of the Office of Works should be extended to the selection of the architect,
and the right of veto should be supplemented b
power of restriction in regard to indicating
character of the desired façades. This, of co
amounts to the suggestion that the designs for
new buildings should be taken out of the han
the insurance companies involved—a course v
in view of the great improvements to Lc
architecture which insurance company building
brought to pass within the last decade, woul
first sight, appear somewhat ungrateful to this
of commercial undertaking. On the other ha
must be remembered that on this occasion it i
ratepayers who will have to foot the bill, and
should equitably have the predominant v
through their official representative, in the ma

THE PLATES.

WE continue in this issue Mr. Edwards's c
survey of the work of Sir John Soane, ir
nection with which we publish two l
showing respectively the main elevation of *Du*
Picture Gallery and three alternative *Desigr*
Trinity Church, Marylebone Road, London. I
be seen that the only emphatic variation in the de
for Trinity Church is afforded by the arch trea
of the portico in the middle design, as opposed t
trabeated fronts of the two alternative buil
Wren's influence is, of course, noticeable in the ge
conception.

The late Georgian house, *Surrey Lodge, Den*
Hill, London, S.E., which is the subject of our
plate, is, in its general design, not unlike c
examples of the American Colonial style. The
elevation, which is shown in the upper part of the
is divided into three bays, the central one, three st
in height, being predominant over the lower side
The treatment of the portico and ground floor wi
to side blocks (a detail of which is shown in the
part of the plate) is particularly interesting. Th
balconies are of a later date, and cannot be
mended; they are somewhat of a blot on what is
wise an extremely beautiful little house.

The remaining plates in this week's issue requi
little explanation or comment. Cottingham's c
for a *Communion Plate for the Altar of a Chu*
True Grecian Style is perhaps a little lacki
vitality. This series, however, is designed to sh
limitations as well as his great and versatile t
Our Student's Drawing (the accompanying pl
which will be found on p. 268), Design for a Bu
Commemorating the Universal Adoption of the C
wich Meridian, is the work of Mr. E. R. F. C
member of the Liverpool School of Architectur
is one of several designs by this clever draugh
which have appeared in the Journal. A full ex
tion of the Practical Chart of Town Planning pro
(Local Authorities' Schemes), of which we p
the first stage in this issue, has been contributed
authors of the chart and will be found on p. 264.
working drawing, showing the *Main Entra*
Currier Hall, Williams College, William
carries its own recommendation.

R.I.B.A. EXAMINATION QUESTIONS
MODEL ANSWERS.

IN response to a very large number of requests
series of articles giving the questions in R.
examinations and model answers thereto, we
to publish next week the first article of such a
dealing with questions and answers in the last R.
Final.

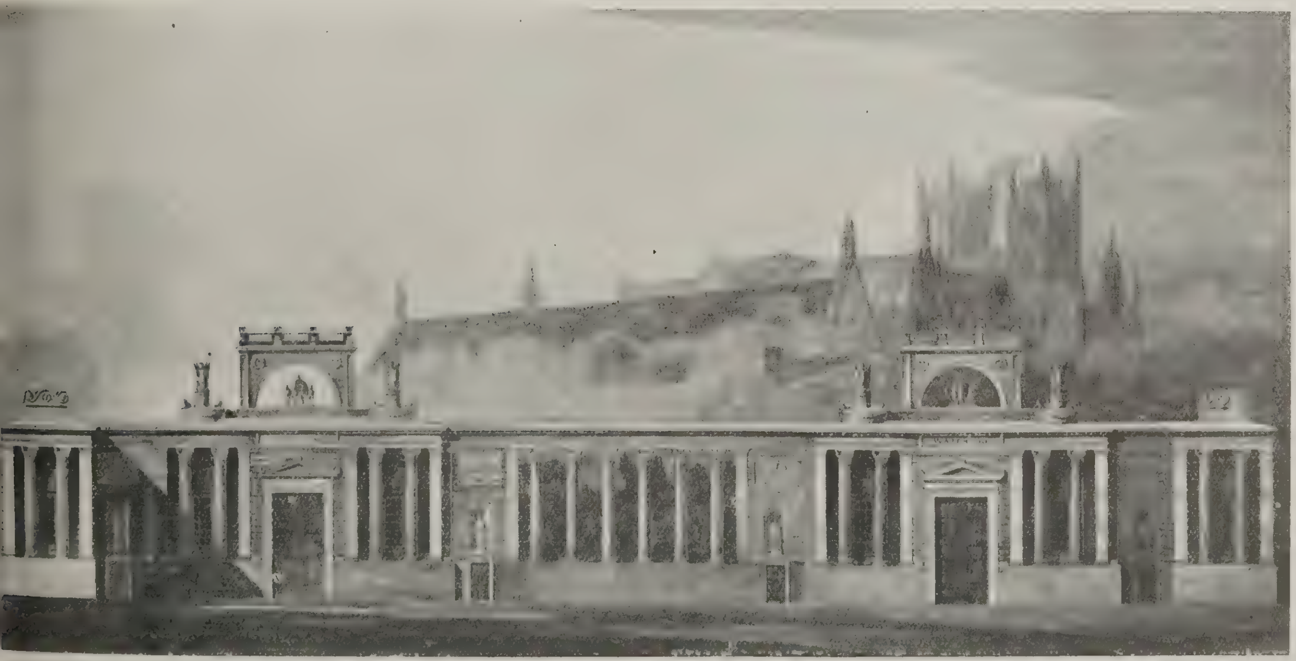
MODERN ARCHITECTS:—I. SIR JOHN SOANE.

(*Continued from* p. 246.)

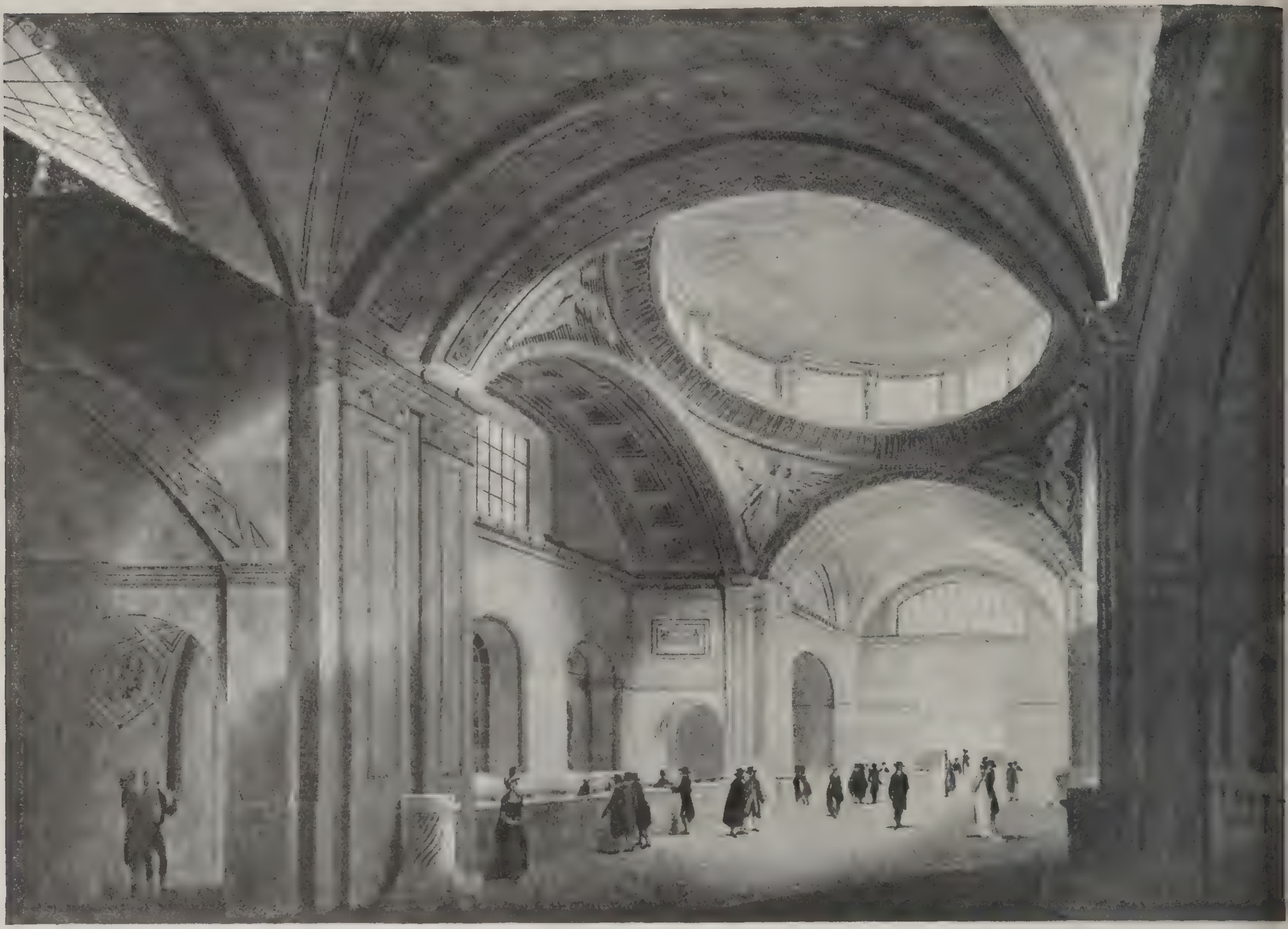
SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

IR JOHN SOANE was an uncompromising Hellenist. "The Greeks," he says, "were the fathers of Science and of Art. Their climate, ir laws, and their mode of life all contributed to give n superior rank in the higher walks of intellect. The eks cultivated architecture so successfully that they to succeeding ages only the humble task of imitat- their works, which will ever be admired, but per- s never equalled." But these words must not be rpreted in a narrow sense. Soane was no advocate lavish copyism, as his own buildings bear witness, when he talks of imitating the works of the Greeks means rather that we cannot depart from the ietypes which the Greeks established. His own uliar method of employing these archetypes, we ll presently consider. Soane's enthusiasm for achievements of the Greeks did not prevent him n having a genuine appreciation of the mighty ks of the Romans, and he regarded with the utmost ror the wreck of ancient civilisation and culture ch followed the introduction of Christianity. The tructive activities of Constantine move him to th, and of the first Christian emperor he sarcasti- y exclaims, "His zeal shone with great lustre, as evinced by the entire demolition of many of the t superb monuments of the ancient world." Soane irns over the magnificent mausoleum of Hadrian, ch was stripped of its beautiful columns in order to orate the church of San Paolo Fuori del Mura, and r the Temple of Venus at Jerusalem, which was wise destroyed. He can see very little virtue either ie Byzantine or the Early Romanesque manners of ding. Of the Church of St. Sophia at Constanti- le he says that it is "a striking example of the rapid line of architecture and the arts connected there- i." Gothic architecture he regarded with an easy rance, and he praises the great daring of the liæval builders. The monkish gloom of the early rches he attributes to the fact that the Christians e at first compelled to worship in catacombs and ght to reproduce similar conditions even when they were at last permitted to hold their services above ground; he lends countenance to the erroneous view (afterwards propagated by Ruskin) that the pointed arch was first suggested by the converging branches of an avenue of trees. The study of Gothic, however, he regarded as an archæological pursuit, and it never occurred to him that any other but the Classic style could possibly be employed by an architect of perception. Let us see what steps he took to make the Classic style a serviceable and pliant instrument.

The orders must first be considered. They are always a stumbling-block. "What is there so sacred in the orders that we dare not change them?"—that is what every student must ask himself. The answer is, of course, that it is a mere fetish to suppose the orders have a fixed proportion. It is a great advantage to go back to Greek models, because they show us the order just as it was in its period of flexibility before it was overladen with the superstitions of Palladio, Durand, Gibbs, and other doctrinaires. According to Soane, "If we direct attention to the three orders of architecture we shall not find any two examples without great difference in quantity and character, and if we apply the test of Vitruvius we learn that columns must be diminished or enlarged according to the nature of the situation. From these examples it is evident that any attempts to establish a general standard of proportion for the orders indicates a total disregard for the principles on which they were produced." He is not in favour of licence, but tells us that "We must find out the causes to which the great varieties in the orders as used by the ancients are to be attributed, for they are not always the result of mere chance or caprice, but frequently produced by sound judgment, correct reasoning, and deep reflection on the great principles of art." The orders comprise far too big a subject to be discussed in all its bearings here, but we may mention some of the particular points to which Soane turned his attention. He was much concerned to establish some distinction between internal and external orders, for it seemed to



ATIONAL MONUMENT FORMING PART OF A GENERAL DESIGN FOR THE IMPROVEMENT OF THE TWO HOUSES OF PARLIAMENT: COURT OF JUDICATURE. SIR JOHN SOANE, ARCHITECT.



CONSOLS OFFICE, BANK OF ENGLAND. SIR JOHN SOANE, ARCHITECT.

him quite irrational that the same species of column and entablature should be used both inside and outside of a building. "It is impossible," he says, "for me to impress too much upon your minds that modillions, mutules, dentiles, and triglyphs cannot be admitted in the interior of any edifice with even a shadow of propriety." Not everybody will agree with this verdict, which is based upon the opinion that the only justification of these features is their constructional origin. Perhaps it will be necessary for æsthetic effect to break the horizontal lines of a cornice, internal or external, in which case modillions and dentiles admirably perform this function. The connection between construction and artistic form is so very slight that it is dangerous to base architectural prohibitions upon considerations of construction alone. It may be argued that the pronounced "drip-stone" type of cornice is quite out of place in a room, and many people would hold that the cove and bead cornice is more suitable, but this latter could hardly be employed in conjunction with an order. It must be remembered that the supposed utility of the drip-stone is not its only justification; it gives to the cornice a most interesting profile, and the vertical fascia is an agreeable resting-place like a long note in a musical trill. Another vexed question of which Soane tried to find a solution is that of the superimposition of orders. "Columns placed upon columns, whether isolated or attached to walls, produce some serious difficulties, glaring absurdities, and striking contradictions. The cornice belongs exclusively to the roof of a building, and it must therefore be entirely suppressed between the two orders." This was the treatment adopted in the only Greek example of superimposed orders, but it does not appear to Soane to be altogether satisfactory, for he adds, "If this is done propriety is in some degree preserved, but an essential beauty is destroyed." The difficulty, however, ceases to trouble us if we regard
the cornice not merely as a gutter, but as a term
group of horizontal mouldings, which may quite
perly be employed when it is desired to separate s
pronounced entities as rows of columns imposed u
one another. In the Italian palaces, where sev
orders are used, the very large cornices which cr
these buildings are sharply differentiated from
intermediate minor cornices marking the divis
between the storeys. Soane himself used the or
with the utmost caution, and ridiculed the idea th
is possible to invent any new species.

Wherein, then, does his originality consist? P
doxical as this may seem, his originality is displaye
his very caution, in his intense desire to have a rea
for everything he did. He realised what is the intri
nature of style. If a manner of building is to
characterised by freedom and order there must
both acts of permission and acts of prohibition.
every "Thou shalt" there must be a correspond
"Thou shalt not." It is a remarkable fact that
caution and restraint led him to invent a new typ
order which is itself symbolic of restraint. It is, a
were, set in a minor key. He felt most strongly
the grand complex orders that had their origin in
temples of the Greeks were not suitable for every-
use. These can only be appreciated at their pr
value if they can be contrasted with a simpler typ
order which could be employed in private hou
shops, and other buildings of the lighter kind. In
Soane was displaying no narrow Puritanical spirit,
he was very fond of the richest ornamentation, whe
its proper place, as his magnificent design for the S
Regia of the House of Lords clearly shows; but he
not wish to cheapen his decorative motifs by too
quent use. One of the greatest dangers that
beset the Classic style is the revulsion of feeling w
will certainly occur if the ordinary Greek columns
capitals are multiplied to such an extent that pe

ome tired of them. Yet there is many an occasion re orders of some kind must be employed if there be composition at all, for they are often the only ns of giving cohesion to façades that are studded windows or of giving interest to façades that are k. Hence, Soane's original order, his flat, fretted, key-patterned order, is of immense value. He nted a great variety of pilaster capitals, which are vned with but a single moulding. Their pattern sists of grooves. Sometimes these are in the shape wo frets facing each other with an anthemion in veen, or they may be simpler still, and grooves are n carried right down the pilaster. Many of Soane's patterns are both ingenious and beautiful, and he pts them to multifarious uses. In the hall at ingham there is a fire-place of which the grate is ing but a rectangular hole in the wall, yet it is le to look quite decorative by means of a simple elegant line-pattern, which frames the opening. ne seemed also able to dispense with mouldings in framing of his doors, and his flat inlaid panels loubtedly showing Pompeian influence) are a sant change from the usual filleted treatment.

oane never displayed his powers to better advan- than on the design of vaults and ceilings. Here, in, he struck upon a new vein. His "umbrella" ngs, as they have been called, have a quite unique rm, and he was able to superimpose them upon ns of various shapes. These fluted vaults are ong the most beautiful in existence, and their rest is enhanced by exquisite decoration. There e just a few occasions, however. when his ingenious nt led him to eccentricity. In one instance there large lantern, of which the four upright sides are ezoids, and an oval window is set uncomfortably in ; in another there is a circle of statues supporting ome upon their bare heads. It is obvious that vns of some kind should be interposed between the res and the incumbent weight. An admirable mple of such an arrangement is the Caryatid porch he Erectheion. Yet another type of ceiling is the distinguished by brackets carrying pendentives, ch are bound together by wooden arches. This tment can be seen in the dining-room and library oane's house in Lincoln's Inn Fields, but it is pos- to contend that it is somewhat lacking in repose. ody, however, could bring such a charge against flat coffered ceilings, in which the interest is con- d to the narrow vertical surfaces that form the al rinking. These are often cut out in the shape emi-ellipses, while the lacunæ at the corners are red with acanthus foliage or other ornament. How mparably superior such ceilings are to the vulgar insipid plaster-work to be found in the ordinary lern "Renaissance" interior!

/ith regard to the art of composition upon a large e, it cannot be said that Soane has very much of nanent value to tell us. We speak now not of the ngement of the orders or of ornamental features, rather of proportion generally and the piling up of ses. Most of his designs are of the kind which be considered "safe"; that is, they are fairly low, buildings, which did not give much opportunity for tacular effect. His attempts at church spires must lescribed as failures, which are the more inexplic- because he had before him the splendid examples Vren, Hawksmoor, and others. Although, how- , he is not always able to combine a collection of e architectural elements into a unity, he appears to insisted that the façades of every building he gned should be homogeneous in character. "There practice," he says, "fatal to good architecture. In dings of this metropolis it is no uncommon thing see one of the fronts enriched with columns, sters, and other ornaments, whilst the flanks are plain as if belonging to other buildings or created lifferent persons at different times. This practice of sacrificing everything to one front of a building is to be seen not only in small houses, where economy might in some degree apologise for the absurdity, but also in works of great expense, both public and private, even in works where in a degree the national taste is implicated. The front of Lansdowne House in Berkeley Square is a striking example of this inconsistency." Most people would take a more lenient view of these examples. There can be no very great objection to a house having one façade which is more highly decorated than the others, and if a cornice is neatly turned upon a corner pilaster, an appearance of finish is obtained, and a band or string moulding that takes up the line of the cornice gives still further cohesion to the design. In the case of houses that are standing free there is less excuse for this practice of stopping a cornice short, but where we have street buildings of different heights it would be an act of pedantry to insist that an elaborate cornice should be taken right round to the back of the building. In this connection Soane severely criticises Smirke's Covent Garden Theatre, but his own design for "an Opera House proposed to be built on the site of Leicester House and Garden" has still graver faults. Many of Soane's larger buildings are distinguished for unexpected attics that are not accentuated in any way upon the façades. This Opera House is a case in point, and it may be remarked that it is somewhat unhappy treatment to take a cornice in one straight line across the two solid wings of the building and a central columnar part. In most famous buildings, where there is a similar disposition of features, the solid wings are projected forward, if only a few inches, and by this means the cornice, having two slight breaks in its line, takes cognisance, as it should do, of the fact that the façade beneath it is not of one uniform character throughout its length.

Soane tried to determine fixed rules for the use and disuse of every species of architectural feature, and that is why a study of his work is such a stimulating and instructive pursuit. Even when considering such small appendages as balusters, he will not allow his critical faculty to be idle. He says, "I am, indeed, disposed to think that balustrades can never be used with propriety except with a flat roof. When balustrades are used in terraces we then perceive their fitness, and are pleased with the light and elegant effect produced, but I doubt whether the eye of taste and reason will be satisfied in introducing balusters in the finishing of bridges. They seem to want essential massiveness." He recognises that this statement is not based upon sufficient reason, and he qualifies it by confessing that "it may in some degree be a mere prejudice derived from the study of antique bridges, all of which have solid parapets."

It is sometimes erroneously held that works of art whose creators have been governed by fixed principles are in a certain measure lacking in vitality. The contrary is true. It is nothing but these underlying principles that can give to a work of art both its form and its vigour. When the use of certain architectural elements is confined to specified occasions, their character and meaning are immeasurably enhanced. The imposing of severe restrictions and prohibitions is by no means a purely negative and destructive action. It is highly constructive and a necessary and most essential part of the process of artistic creation. And even if we cannot always approve of the particular prohibitions that Soane would impose, we can admire the rigid impersonal spirit which these prohibitions express. An intense horror of all licence and slovenliness was characteristic of Soane. At the present day, when an interest in the theory of Classic architecture is at last being revived, Soane will emerge from the neglect which he has suffered and will become quite modern. It is for this reason that he takes rank in this series of "Modern Architects."

A PRACTICAL CHART OF TOWN PLANNING PROCEDURE FOR SCHEM PROMOTED BY LOCAL AUTHORITIES.

By R. IVESON DENHAM, Assistant Solicitor to the Corporation of Huddersfield, and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., an Assistant Engineer to the Corporation of Huddersfield.

IN view of the tendency on the part of local authorities to consider the important subject of town planning, no apology need be offered for the introduction of a method enabling members of local authorities, local government officials, solicitors, surveyors, agents, and landowners, to follow more easily the procedure which is necessary in promoting a town-planning scheme.

As the majority of readers interested in the subject of town planning are no doubt aware, a fresh set of regulations was issued on February 11th last. These regulations revoke those issued in 1910 as far as schemes promoted by local authorities are concerned, and the old regulations still remain in force for schemes prepared by owners and adopted by local authorities. The Local Government Board in issuing these new regulations state that four years' experience of the old regulations has led them to the conclusion that a modification was expedient, especially with regard to the procedure prior to an application for authority to prepare a scheme.

After a very careful perusal of the new regulations the authors are of opinion that the procedure is still somewhat lengthy and complicated, and they have accordingly prepared a chart of which the first section forms one of the plates in the present issue. The remaining sections will follow in due course. It is only intended for use in the promotion of schemes by local authorities, and is put forward as an effort to simplify the comprehension of procedure. This chart will be followed at an early date by a similar one dealing with the procedure in the case of schemes prepared by owners and adopted by local authorities.

The simplification claimed above is obtained by a division of the work into eight self-contained stages, and by giving the various steps, in, as far as possible, chronological order, into which each stage can be divided.

The adoption of this natural grouping gives the reader, it is hoped, a better grasp of the subject than is obtainable by reading the Local Government Board's regulations, which are still possibly slightly ill-arranged from the point of view of anyone wishing to gain a clear and concise knowledge of the different steps and a foresight into the later stages.

While, as will be further mentioned below, there is under the new regulations some saving in the actual work to be done in promoting a town-planning scheme, still, as far as the arrangement of the articles is concerned, there is apparently very little improvement in the new regulations. As one example of this it may be mentioned that in unearthing the particulars required to be sent up with the application for authority to prepare a scheme it is necessary to refer from Articles V. and VI. to Article XXIII., and back again to Articles II. and III., with probably a reference to Article XXVII. in addition, whereas in the chart all these particulars have been grouped together in one column.

Whilst this is the first use to which the chart may be put, it is by no means the most important, as it has been compiled so as to be used as a reminder of the details to be attended to at any period during the promotion of a scheme.

By means of large type, special prominence has been given to the limit of time in which any step must be taken. It is hoped that the chart will be found useful to solicitors, surveyors, and agents acting for interested landowners and societies in affording to them a clearer conception of the numerous notices that their clients will receive and of the frequent occurrence of op tunities for making objections and representations thereby lessening premature opposition.

The chart is in no way offered as a substitute for Act and the Local Government Board's regulati but it is intended to be used as a companion to tl and a reference has in all cases been given in sq brackets at the end of a step to the appropriate sect or articles, as the case may be, for the actual detai such step.

The idea underlying the chart is uniformity, with this end in view the tabulation has been arrar in sub-divisions common to the majority of the sta

The resolutions given in column 2, with the ex tion of those specifically denoted statutory res tions, suggest themselves as being necessary to r the exigencies of the subsequent procedure, but are to be taken as stereotyped. No mention has l made of the resolutions which the local authority m deem expedient in controlling its deliberations in c mittee.

It is not inappropriate at this juncture to re briefly some of the more important changes introdu by the new regulations. The first amendment of is the exclusion of occupiers from the list of persor be served with notices at the various stages c scheme, and the word owner is now defined as ha the meaning attached to it in the Lands Clauses A Further, in connection with the service of notices tl is a new proviso which is inserted in Article XXI the effect that an accidental omission of the servic a notice shall not render the proceedings void. view of the Board's statement that no notice neec served on occupiers, it is somewhat inconsistent to in Article XXIII., line 25, the expression "ow lessee, and occupier."

Also, it is now definitely stated in Article IV. that Map No. 1 may be used for Map No. 2 under tain conditions, whereas previously the Board only given permission for this in their circular le dated May 3rd, 1910.

A further alteration in the procedure is the subst tion, at the option of the local authority, of a nc stating that they will hold conferences as deman by the owners, for the public meeting, which origin had to be held before applying for authority to pre a scheme.

In addition, Maps 3 and 6 in the old regulations r not now be prepared, the other maps being renumb accordingly.

The Local Government Board must now informed at once of the issue of the notice that local authority intend to apply for authority to pare a scheme, the object of this no doubt bein keep the Board informed of what schemes are in templation by the various local authorities throug the country. Under the old regulations a notice to be served on all owners, lessees, occupiers, etc., authority to prepare a scheme had been received, that the local authority were preparing a scheme, w now a newspaper advertisement suffices, this altera saving a considerable amount of clerical work expense. Another saving in expense is brought a by the omission of the service on owners, etc., of draft order of the Board modifying a scheme in st six, as since this draft order has now only to deposited it will not be necessary to have copies printed.

While all these alterations will tend to ease economy in promoting the scheme, the new regulat

ain one provision which will add considerably to
work of the surveyor. This provision, which is
rted in Article XV. (f), compels the surveyor to
the approximate area of land owned by the diffe-
owners in the scheme, whereas previously this
rmation had not to be supplied in the case of a
me promoted by a local authority.

ith these exceptions the procedure has undergone
little change, notwithstanding the fact that there
now only twenty-nine articles instead of thirty-six
rmerly, this reduction in number being obtained
he most part by including in one article of the
regulations matter that occupied two or more
les of the original regulations. As in the case of
ld regulations, Article XXVI. provides for depar-
from the regulations with the consent of the Local
ernment Board.

is provided by Article XXVII. that where any land
ded in a scheme is within the distance prescribed
he Local Government Board under Section 74 of
Act, of any Royal palace or park, notices must be
to the Commissioners of Works. This distance
een fixed by the Local Government Board by an
r dated September 2nd, 1910, to be two miles in
ase of Windsor Castle, Great Park or Home Park,
half a mile in the case of any other Royal palace
ark.

connection with the various maps required to be
ared, attention may here be drawn to the fact that
r Article XIII., Map No. 3 prepared in accordance
Article X., may also be used for Map No. 4, pre-
d in accordance with Article XIII., if these two
s are identical, or the Board consent under
le XXVI., in which case, however, the map used
be marked both as Map No. 3 and Map No. 4.
er Article IV. (d) a similar course may be adopted
regard to Maps Nos. 1 and 2. Sundry particu-
in regard to the preparation of all maps will be
d in Article XXIV., and this article also makes
isions for the supply of copies and extracts to
ested persons on payment of a reasonable fee, and
for the inspection of any plan referred to in
le XXI. Whilst it will be seen from the chart
Map No. 2 is not to be deposited for public inspec-
yet it would seem from Article XXIV. that copies
can be obtained on payment by any persons
ested.

cording to Article XXV. the local authority must
sh any additional particulars or plans which the
l Government Board may require at any stage of
promotion of a scheme. It is, however, quite
ssible to insert this information in the chart, as the
d's requirements will vary with the circumstances
iar to any scheme.

attempt has been made in this article to deal
questions which might be considered by some to
a controversial nature, its object being merely to
attention to the more important differences
een the old regulations and the new, and to the
al provisions in the regulations which could not,
convenience, be inserted in the chart.

conclusion, it may be stated that every care has
exercised in the preparation of the chart, which it
ieved is free from mistakes, but the authors will
ateful for the communication of any error which
e discovered.

KING'S CROSS COMPETITION.

VING to the large number of drawings received
in this competition, we have found it impossible
to publish the results in this issue, as we had
ded to do. These, however, we hope to be able to
nce in next week's paper.

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or opinions expressed by correspondents, who are asked to be brief, and to write on one side only of the paper.

Professor Lethaby and Ruskinism.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—I see that in your report of the discussion following on Mr. March Phillipps's lecture, you quote me as saying that it was Ruskinism and that Ruskinism had been proved wrong. What I said was very different—it was to the effect that those who did not agree with Mr. March Phillipps and with Ruskin, as *I do*, would say all that. Ruskin is now nearly old-fashioned enough to be in vogue again, and I am almost unashamed to begin mentioning him again to a world which has changed his lamps for new ones.

W. R. LETHABY.

[We are sorry for the misinterpretation of Professor Lethaby's alusion to Ruskinism, but in justice to our reporter we must point out that the mistake was a natural one to make. The report of the discussion in the current Journal of the Institute gives the passage referred to as follows: Professor Lethaby had alluded to the generosity of the Institute in showing hospitality to Mr. March Phillipps, and the report proceeds: " But even in this generosity we know how to protect ourselves fully. We knew exactly what he would say; we know exactly what we shall say afterwards. We say: 'It is Ruskinism, and Ruskinism is all rot.' 'That has been proved for a dozen years,' we say; 'that is settled.' And since a fortnight ago we have been told all about art. Art is 'significant form': that is the last word; and so on, and so on. Really, what we think is that 'art is the work of artists; and we are artists, and we do it.'" Professor Lethaby's letter makes it clear that in this passage he was speaking hypothetically; but our representative's momentary misconception arose from the delicacy of the speaker's irony.—EDS. A. AND B.J.]

"A Novel Staircase."

To the Editors of THE ARCHITECTS' AND BUILDERS JOURNAL.

SIRS,—Your contributor "E. G.," in bringing to our notice "A Novel Staircase" published in last week's Journal, clearly shows how ridiculous a clever invention becomes when misused by the incompetent.

This "novel" staircase—so "crafty and ingenious"—is an example of that freakish, unpractical, and bad planning which causes the public to heap condemnation and often ridicule on our profession.

ERNEST G. THEAKSTON.

College of Masons?

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—A few years ago I wrote a contemporary weekly journal inquiring for particulars of the College of Masons, and in reply I was told that no such college existed. On a recent publication, however, I observe that the author is a Fellow of the College of Masons, and as I believe that such a college must exist somewhere, I would esteem it a very great favour if you would kindly let me know where I could obtain particulars regarding it.

GEOMETER.

[Perhaps one of our readers can supply the information asked for.—EDS. A. AND B.J.]

LONDON'S BYGONE BUILDING ACTS AND THE DEVELOPMENT OF LONDO

BY W. R. DAVIDGE, Assoc. M.Inst.C E.

IN a paper read before the Royal Institute of British Architects on April 6 last, on "London's Bygone Building Acts and the Development of London," Mr. Davidge said that we looked at an old building with a sympathetic interest, and strove to piece together its history, bit by bit, from the features we could put a date on; but had it ever occurred to us to analyse in the same way the structure of the enactments on which London had been framed? With regard to the various stages in the growth of London, a great deal had been written about Roman London, and still more conjectured. One thing certain, however, was that the Roman building laws were enforced in Londinium Auguste, as elsewhere in the Empire, and there was no reason to doubt that the general rectangular arrangement of the walls and streets was extended considerably during the 400 years of the Roman occupation. According to Professor Haverfield, the town areas are divided by two main streets, north and south, east and west, into four parts, and by other and parallel streets into square or oblong house blocks (insulae), and the rectangular scheme is carried through with some geometrical precision.

The insulae are fairly uniform in size, but those on the north side of the east and west street are often larger than the rest.

In most towns, though not in all, the dimensions of the insulae show a common element. In length or in breadth, or in both, they approximate to 120 ft. or some multiple of that. The unit of Roman land surveying, the "iugerium," was a rectangular space of 120 by 240 Roman feet—in English feet a trifle less. The general practice in this respect seems clear and is found elsewhere in Britain at Silchester.

In Ogilby's map of 1677 the dimensions of the insulae forming the rectangular blocks would be found to agree almost exactly with those laid down by Professor Haverfield.

Early Attempts at Fire Prevention.

FitzStephen's attractive account of London, written about thirty years before this, records that: "The only pests of London are the immoderate drinking of fools and the frequency of fires."

FitzAlwyne's Assize of 1189, although aimed against the spread of fire, was not intended to be compulsory, but rather permissive in character, and to facilitate the erection of stone party walls to separate premises belonging to different owners, and "especially for appeasing contentions which sometimes arise among neighbours." Up to this date the greater part of the city had been built of wood, roofed with straw, reeds, and similar materials, and the great fire in the first year of King Stephen (1136), which destroyed practically the whole city, was still in painful remembrance. It appears from the opening statements that after this widespread fire the more wealthy citizens rebuilt their houses with stone party walls and covered the roofs with thick tiles, but that wood and thatch were still in general use.

Ancient lights did not worry the architects of those days, and the height of buildings was a matter of sentiment. The serious fire of 1212 was responsible to some extent for "panic legislation."

A general admonition was given to whoever wished to build "to take care as he loveth himself and his goods, that he roof not with reed nor rush, but with tile only or shingle or boards or lead." All thatched houses were to be plastered over within eight days, under pain of being demolished. All wooden houses in Cheapside were to be pulled down or amended to the satisfaction of the Mayor and Sheriffs. Finally, although no special means of escape were stipulated, the Aldermen of each ward were to have "a proper hook or cord," and fire appliances were to be provided during the summer months in front of every house, in the form of a tub, either of wood or stone, full of water.

Early City Extension and Town Planning.

The days of Edward I. were great in building development. Not only were the city walls of London extended to include the monastery of Blackfriars (1276), but many new towns in all directions were planned and built under Edward's orders. The new town of Winchelsea dates from this period, and there are many mediæval towns in Guienne and Aquitaine founded by Edward I.

London continued to grow. On the south side of the river, Southwark was granted to the City in 1327 by Edward III. on payment of £10 annually, and in the reign of Edward VI., on valuable consideration paid to the Crown, it was formed into a twenty-sixth ward, by the title of Bridge Ward Without (*Pennant*). In London and the suburbs the use of coal was prohibited in 1306.

The city began to stretch out beyond its walls. The Forest of Middlesex and the Warren of Staines were disafforested in the second year of Henry III., since which time Stow says that the suburbs of London had "mightily increased with buildings."

So long ago as the reign of Edward III. (1350) legislation was passed with the idea of keeping down wages, and the interesting Act of Henry VIII. concerning artificers and labourers was only one among a series of similar enactments (6 Henry VIII. cap. 3).

Attempts to Restrict Building.

In the early years of Elizabeth the struggle to provide for the ever-increasing population was becoming an acute one. Doubtless the jerry-builder was doing his best to supply the need for small houses and crowding as many houses as possible on to the acre, for in 1588 (31 Elizabeth, cap. 7) we find "an Acte against erectynge and mayntayninge of cottages, which are daily more and more increased in many parts of this Realme." By this Act an attempt was made to provide a limit, not for the number of buildings per acre, but for the number of acres per building. No cottage or building was to have less than four acres of ground (the penalty for infringement was £10 and 40s. for every month the offence continued), and no cottage was to be occupied by more than one family. This Act did not, however, refer to London or other large towns, and exception was made for coal miners and similar workers.

The famous Act of Queen Elizabeth in 1592 (35 Eliz., cap. 6) forbidding any new building within three miles of the City of London is, of course, well known. Its opening words give a striking description of the overcrowding and insanitary state of London at a time when its outward appearance, as shown in Wyngaerde's map, was so attractive and picturesque.

The effect was considerably spoilt, ever, by limiting the Act to seven y and by allowing an exemption for la houses assessed at anything above £ annum.

The modern idea of the healthfulne an open belt of country was evidentl ginning to make itself felt, for we fi strong prohibition against any furthe closure or encroachment on the num commons and open land within three of the city, such open spaces having for many years "heretofore used for t ing and mustering of soldiers, and fo creation, comfort, and health of people."

The Act for Rebuilding the Cit

The direct ancestor of our modern ing Acts was "*The Act for Rebuildin City of London*," after the Great Fir

For the better regulation, unifor *and gracefulness* of all new buildings were to be divided into four classes, ing upwards in quality:

First and least sort: Fronting by-la

Second sort: Fronting streets and of note.

Third sort: Fronting high and prir streets.

The roofs of all these classes wer quired to be uniform, and this restr seems to have applied to all building cept the halls of the various companie similar buildings.

Fourth and largest sort: Mansion h for citizens or other persons of ex dinary quality not fronting either three former ways.

The object of the first three classe to provide for varying thicknesses of and heights of storey.

In the fourth class, which consist mansion houses "of the greatest bigr not fronting on any street, the numbe height of storeys were left to the disc of the builder, but not in any case to e four storeys (in addition to cellar garret). The scantlings of timber also scheduled.

It is somewhat strange that siz timber are not now stipulated by the don Building Acts, though such a sch is common enough outside the L area.

The raising of prices of bu materials by means of "rings" or binations was evidently not unknow we find a provision enabling two J of the King's Bench to fix the pric brick, tiles, and lime. A similar m was to be adopted in case of combin or exactions by workmen.

All questions as to placing or stoppi ancient lights, watercourses, gutters, were to be referred to the arbitrati the Alderman. Sewers, vaults, and p of streets were to be dealt with by missioners, who were empowered to a special tax for the purpose.

The clauses of this Act dealing street widening and improvement a structive. The streets as a general were to be 24 ft. wide, and the Act o states that many builders advanced foundations further than formerly to s regularity for the new streets. Pay was to be made for land taken, the pr be assessed by a jury. A "bettern clause also existed giving power to c the owners of houses improved b opening out of streets.

This additional Act (1670) confirm

on of a continued tract of ground
wide from London Bridge to the
for the purpose of the new quay,
ontrary to the usual impression,
an be no doubt that such a quay was
y provided and that it existed for
150 years. This Act does not in-
he length from London Bridge to
wer, which appears to have been
constructed.

ueen Anne Period—1707-1708.

still continued frequent, and
attempts at fire prevention were felt
useless without proper appliances.
reign of Queen Anne two Acts (6
cap. 58 [1707] and 7 Anne, cap. 17
were passed, making it compulsory
parish to provide two fire engines
one large engine and also a hand
and the prompt attendance of the
gines was secured by offering re-
of 30s., 20s., and 10s. for the first,
and third parish engines to reach
ne of a fire, "provided they arrived
e and in good order."

t Numbering was first introduced
the eighteenth century, the first
instance being in Prescot Street,
hapel, which is mentioned by
in 1708 as having the houses dis-
ned by numbers instead of signs.
r two other streets were either
y or wholly numbered in the first
that century, but this did not be-
opular until after the Act of 1762
III., cap. 23), which required the
from the streets in the West End
ging signs, and for the fixing of
the fronts of the houses to which
longed. In 1765 (6 Geo. III., cap.
er was given to the Commissioners
rs in the City to regulate projecting
and the same Act also made pro-
or the names of streets to be put up
houses numbered (within the City
lon). Street lighting was under-
y the Commissioners in 1767. To-
he end of the century the number-
houses had become general, and
f the older streets, especially in the
d West End, still retain substan-
e numbering then applied to them,
em of "consecutive" numbering
sed, as opposed to the "odd and
principle of the present day. *Street*
was not apparently controlled
55, when the Metropolitan Board
s was empowered to deal with the
under the Metropolis Management
ot before it was needed, however,
868 there were no fewer than 40
treets, 50 George Streets, and 65
Streets within the area of London.

The "New Road."

New Road (Euston Road, etc.),
Geo. II., cap. 88).—To enable the
e trustees of the turnpike roads
to Highgate Gatehouse and Hamp-
d from Saint Giles Pound to Kil-
ridge, in the County of Middlesex,
e a new road from the Great
n Road at Islington, to the Edg-
ad near Paddington, and also from
h end of Portland Street cross the
Pye House Fields into the said
d, and for enlarging the terms and
granted by two several Acts for re-
the said road from Saint Giles
o Kilbourn Bridge."
ns the brief description of the
and most farsighted piece of street
in the middle eighteenth century.
v Road from Paddington to Isling-
ich, as the Euston Road, Maryle-
oad, and Pentonville Road, now
vital a metropolitan thoroughfare, was laid out in open fields a mile or more away from the built-up area, but with a width of 150 *ft.* between the buildings. With this example of our great-grandfathers before us, why do we so often take a limited view of the future, when London shall be vaster by far than the London we now know?

The laying out of the great "New Road" was not the only evidence of foresight in the direction of wide roads sufficient for the future needs of the metropolis. The general Turnpike Acts, so long ago as 1773, provided for turnpike roads to be at least 60 ft. wide, and no encroachment in the way of hedges or ditches was allowed within a distance of 30 ft. from the centre of any turnpike road.

Public Improvements in the Eighteenth Century.

The early years of George III. were remarkable for the thirst for public improvements in London.

One of the most complete and carefully thought-out schemes for London improvement is to be found in a book by John Gwynn, published in 1766 under the title of "London and Westminster Improved," illustrated by plans, to which is prefixed a discourse on Publick Magnificence. Gwynn was the architect of the well-known English bridge at Shrewsbury, and a friend of Dr. Johnson. As an architect, he was a keen advocate of a complete town plan for the already overbuilt capital.

One or two illustrations of Gwynn's proposals will serve to show that nearly all the important improvements that have since been effected were foreshadowed by him: The Thames Embankment (but from Westminster to the Tower); Waterloo Bridge; Parliament Square; the Processional Way and entrance to Charing Cross; a public square at the west of St. Martin's Church where now stands Trafalgar Square; new streets between Holborn and the Strand; New Oxford Street, Moorgate Street, and many others, are all shown on Gwynn's plan a century or so before they were actually executed. This should give encouragement to the bold dreamers of the present day who can look forward with the eye of the seer to a London of the future, compared with which the present London is but a faubourg.

After describing subsequent building Acts, Mr. Davidge gave some interesting facts concerning the improvements of the nineteenth century.

Street Improvements of the Nineteenth Century.

Apart from innumerable street widenings, the following is a list of some of the important new streets cut through the built-up area during the century:

	Opened.
Regent Street	1819
Cranbourn Street	1844
New Oxford Street and Endell Street	1845
Victoria Street, Westminster	1852
Moorgate Street	—
King William Street, London Bridge	1834
Cannon Street (Western Portion)	—
Holborn Viaduct	1869
Farringdon Road	—
	Completed.
Garrick Street	1861
Southwark Street	1862
Burdett Road, Victoria Park	1862
Queen Victoria Street	1871
Commercial Road (extension)	1870
Holborn (removal of Middle Row)	1867
Commercial Street, E.	1858
Great Eastern Street	1876
Clerkenwell Road and Theobald's Road	1878
Northumberland Avenue	1876
Eastcheap (Over Metropolitan Railway)	1884
Shaftesbury Avenue	1886
Charing Cross Road	1887
Rosebery Avenue	1892
Middlesex Street (extension)	1896
Tower Bridge Road	—
Strand widening, Aldwych and Kingsway	1905
Charing Cross and Mall and Processional Way	1910

Thames Embankments.

Victoria Embankment, 1870	Total length, 3½ miles
Albert Embankment, 1869	
Chelsea Embankment, 1874	

New Parks.

Victoria Park, 1841, cost £130,000.
Battersea Park, 1846, cost £316,000, both then on the outskirts.
Finsbury Park, Brockwell Park, and many others.

Nearly all the London improvements of the past have been carried out by means of indirect taxation. The coal tax of 1s. 3d. a ton, which was devoted almost entirely to purposes of street improvement, produced in 1859 as much as £240,000, and is stated not to have been appreciably felt.

The growth of London has all through the centuries been a source of wonderment and pride to successive generations of Londoners. Each generation, as it entered into its inheritance, has felt a glow of conscious pride at the immensity of the City, and each in its turn has felt that the limit of the vast metropolis had been reached and that the prodigious increase could not go on. It has gone on, though, and bids fair to keep going on at an even accelerated pace.

Statisticians may say that the last decade shows a decline, that the County of London has actually less people than ten years ago; but London knows nothing of county boundaries or administrative areas. The vast community which looks to London City as its focus is spread over an area much greater even than the Greater London of the Metropolitan Police area, stretching as that does to a circle of over thirty miles in diameter. In less than fifty years the population will be double what it is to-day; the present generation has before it the task not only of improving our present-day London, but of building an immense city as large again, which shall encircle it north, south, east, and west. We must prepare, and prepare at once, for so gigantic a task. We can see ahead but a little way, but that little way is lighted by the illumination which comes to us from the past.

Discussion.

Lord Peel, Chairman of the L.C.C., proposing a vote of thanks to Mr. Davidge, said that after seeing the various plans that had been shown of improvements suggested for London in the past, one could not help thinking that all our modern ideas were taken from the overflowing and prodigal imaginations of our ancestors. People, he continued, criticised the L.C.C. because they did not start gigantic schemes of improvement at once. He spoke with architects and others who said London deserved great bridges and noble streets; and when, in order to do something, they put the rates up by a modest 2½d. they found the whole world of architects, æsthetes, and even the London Society itself, rising up in indignation. London was not hopeless, but it was congested with difficulties. Improvement was mainly obstructed by the unwillingness of the London ratepayer to contribute towards the cost.

Captain Swinton, seconding the vote of thanks, pointed out that though opportunities for the improvement of London had been missed in the past, there were some which still remained. One was the south side of the Thames between Blackfriars and Westminster Bridges. Here there was a chance to do something really fine if they could only combine and see the thing through. If the County Council could get the Aldwych site off their hands (and he believed it stood at two millions in the books) there would be some possibility of beginning improvements. He hoped they would then deal with the other side of the river and with the outskirts of London. The more we could spend upon London now the better would it be for the future; but, as always, we never looked far enough ahead. He thought that the improvement of the Imperial city should receive a certain amount of financial assistance from the Imperial Government. Having urged architects to cultivate a more neighbourly feeling towards one another's buildings, the speaker referred to the development of the new Delhi. The Government owned all the soil and would erect only the class of building that suited their requirements. Messrs. Lutyens and Baker would be responsible, he hoped, not only for the Government work, but for the majority of buildings put up in the new city. Each house was to stand in three acres of ground, and streets were to be from 100 ft. to 200 ft. wide, so there was no need to worry about the building acts of Delhi.

Professor Haverfield said he was interested in the subject under discussion mainly from the historical point of view. He was not inclined to believe that there was much left of the Roman London at the present time. Dealing with Mr. Davidge's theory of the Roman town plan, the speaker said that if traces of a temple were found at any point, then it was obvious that they were not on the site of a Roman street.

Sir Laurence Gomme said he detected in the Building Acts of London a strong trace of continuity between Roman and later times. The Building Acts made after the fire of the twelfth century, having as their object the reconstruction of buildings in stone, meant one of two things: Either that they were a direct copy from Roman prototypes or were descended from previous ideas of buildings.

Mr. Andrew Taylor having spoken,

Mr. Hudson, K.C., suggested that we jumped ahead of our times and made a beginning with new roads at a considerable distance outside London while the land was cheap. This was being done in Liverpool. It would be a good thing, too, to invest the Tribunal of Appeal with more power. At present they were only able to fix the general line; but if they had power to fix the actual building line a great improvement to London would be the result.

Mr. Culpin said that already the proposed circular roads around London were impossible because of the building work that had been carried out over their course. Surely we should do something at once before further difficulties arose. Mr. Davidge, he continued, was shortly leaving for Australia, carrying with him the gospel of town-planning. It was interesting to know that messages had been received from practically every important city on that continent stating that arrangements were being made to welcome Mr. Davidge, towards the cost of whose lectures at least three of the Dominion Governments had promised to make grants.

Mr. E. Fiander Etchells said he failed to see the stringency of the London Building Acts, between which and those of Babylon he proceeded to draw a comparison, mentioning clauses in the latter which stipulated severe punishment for the builder whose buildings should prove dangerous to the occupants. One clause decreed that if a building collapsed, killing the occupant, the builder's own life should become forfeit!

Mr. H. V. Lanchester (who occupied the chair) dealt with one or two of the points that Mr. Davidge had raised. If we did not want to have streets like cañons or like the thoroughfares of New York and some of the Spanish cities, we had to have them wide and spacious. If we could not go low from the æsthetic point of view it was better to go high. If we went on erecting high buildings in Regent Street it would become one of the most uncomfortable streets in London. Northumberland Avenue was an example of the unsatisfactory effect produced when the width of the street was about the same as the height of the buildings by which it was lined. In regard to cubical contents, also, the Building Acts might be relaxed, for at present they put a disability on London traders suffered by no other traders in the world. He disliked by-laws altogether, and would prefer that every case should be treated on its merits.

Mr. Davidge briefly replied.

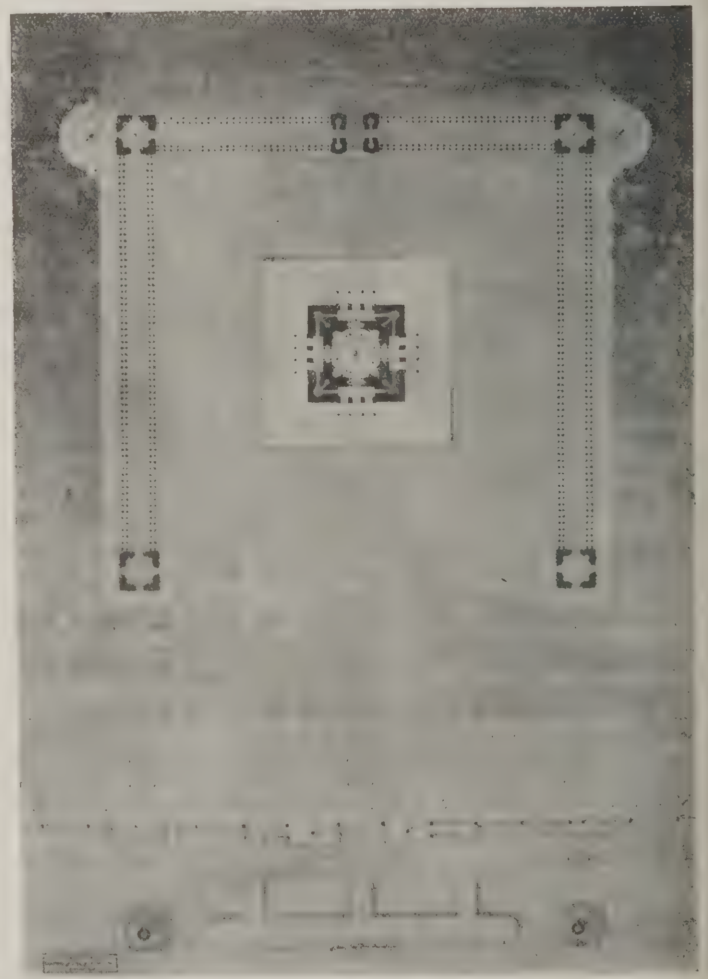
SOCIETIES AND INSTITUTIONS.

UNIVERSITY COLLEGE.

Annual Report.

The annual report on the work of the University of London, University College, has just been issued. The total number of students during the session 1912-13 was 2,083. These were distributed as follows:
Faculty of Arts, 219 men, 205 wo
Department of Fine Arts, 83 me
women; Faculty of Science, 147 m
women; Faculty of Medical Science
men; Faculty of Engineering, 128
Faculty of Laws, 34 men; Postgr
and Research, 294 men, 117 w
Evening Students: Faculty of Art
men, 294 women; Faculty of Scie
men; 32 women. In addition to
numbers there were 196 students of
colleges attending the various inter
giate courses; the special cours
teachers were attended by abou
teachers, and the public lectures,
are open to the public without paym
ticket, were attended by upwards o
persons. The number of graduat
144, of whom 113 took honours a
gained University Scholarships.

The report contains a general su
of the activities of the College. Th
important event of the past year i
haps, the combination of the two s
of architecture previously separatel
ducted at University and King's C
under the name of the University o
don School of Architecture, and th
pletion of the new building th
This building provides accomm
for upwards of one hundred stude
includes: three large studios (50
35 by 22 ft., 27 by 29 ft.), a museum
sq.), a cast gallery (48 ft. by 28
library (35 ft. by 22 ft.), a lecture
(46 ft. by 28 ft., with two scre



PLAN OF BUILDING COMMEMORATING THE UNIVERSAL ADOPTION OF THE GREENWICH MERIDIAN.
BY EDWARD R. F. COLE.
(See Plate in this issue.)

lanterns), a class room (27 ft. by
and an entrance hall (27 ft. by
There are also private rooms for
ors and lecturers, a diagram room,
oom, cloak rooms, lavatories, and
nal rooms for new developments,
can be utilised as required. It is
d to use some of these rooms at an
ate for a department of town-plan-

University College Committee will
sted in the management and de-
ent of the new school by an
ctural Education Committee. The
ng is the constitution of the first
ctural Education Committee: The
llor, the Right Hon. the Earl of
ry, K.G., K.T., D.C.L., LL.D.,
; the Vice-Chancellor, W. P.
gham, M.D. (Chairman); the Chair-
Convocation, Sir Edward H. Busk,
L.B.; the Principal of the Univer-
r Henry A. Miers, M.A., D.Sc.,
; Sir Herbert H. Bartlett, Bart.,
or S. D. Adshead, F.R.I.B.A.;
ld Blomfield, President R.I.B.A.,
M.A.; J. J. Burnet, A.R.S.A.,
F.R.I.B.A.; Professor W. E.
M.A., B.Sc., M.Inst.C.E., M.Inst.
A.M.Inst. N.A., F.R.S.; Ernest
, A.R.A., Vice-President
.; Hon. R. C. Parsons, M.A.,
C.E., M.Inst.M.E., A.Inst.E.E.;
ncipal of King's College, Ronald
rows, D.Litt.; the Provost of Uni-
College, T. Gregory Foster, B.A.,
Professor A. Schuster, Ph.D.,
D.Sc., Sc.D., F.R.S.; Professor
Simpson, F.R.I.B.A.; John Slater,
F.R.I.B.A., Professor R. Elsey
F.R.I.B.A.; Andrew T. Taylor,
.A., R.C.A., L.C.C.; and Edward
, F.S.A., F.R.I.B.A.

ERDEEN SOCIETY OF ARCHITECTS.

annual general meeting of this
was held in the rooms of the Nor-
rts Club, Mr. Arthur Clyne, Presi-
the Society, in the chair. Mr.
rne Maclennan, Hon. Secretary,
the meeting the Council's report on
irs of the Society during the past
subjects dealt with including revi-
the Society's general conditions of
, the Society's closer relationship
Aberdeen Architectural Associa-
d the institution of a Joint Archi-
Library, registration of architects,
architecture, the Society's drawing
ign competitions, and the Scottish
Trades Federation's proposed
for the adoption of uniform modes
rement.

President, in the course of his
said the Society had existed now
sixteen years, and he considered,
detail, what it had done and what
s to do. Concluding his remarks,
ne referred to the fact that he had
pleted a second period of five suc-
years as President, and while
thanking the Society for the
and for their confidence thus
n him, intimated that he had defi-
ecided to retire from office at the
time.

ouncil and office-bearers were then
as follows: President, Mr. A. H. L.
on; Vice-President, Mr. George
Messrs. Brown and Watt); Hon.
y, Mr. R. G. Wilson, jun.; Hon.
er, Mr. G. Bennett Mitchell;
s of Council, Mr. Arthur Clyne,
J. Devlin, Mr. Clement George,
. Macmillan, and Mr. John Rust.

OTHER PEOPLE'S OPINIONS

Bramante v. Sangallo.

It cannot be denied that Bramante was a skilful architect and the equal of anyone from the time of the ancients until now. It was he who drew up the original plan of St. Peter's, not full of confusion, but clear and straightforward with ample light and detached from the surrounding buildings, so that it did not in any way interfere with the Palace. It was considered to be a fine design, and there is still evidence that it was so; indeed, every architect who has departed from Bramante's plan, as Sangallo has done, has departed from the right way, and that this is true may be seen by anybody who looks at his (Sangallo's) model with unprejudiced eyes. In the first place, the outer ring of chapels he shows will exclude all the light provided by Bramante in his plan, and not only this, but he has not provided any fresh means of lighting, while there are so many gloomy lurking-holes, both above and below, that any sort of knavery could easily be practised, such as the hiding of banished persons, the coining of false money, the rape of nuns, and other misdemeanours. Furthermore, there would be this other drawback, that in adding this circular work to the outside of Bramante's plan it would be necessary to pull down the Pauline Chapel, the offices of the Piombo, the Ruoba, and many other buildings. I do not think that even the Sistine Chapel would remain intact.—Michael Angelo's Letters.

Nineteenth-Century Stained Glass.

When the glass painters tried to follow out the ideas of Winston, and revived mosaic glass-painting, the result was, if anything, worse than before! Nothing exceed the appalling results of early nineteenth-century work. Now, why was this? First of all I think it was largely due to their firm conviction that bad drawing was the main characteristic of early work—they thought they had only to be primitive enough in their execution to secure the spirit of the early workers. I mention this because I have seen quite recently the same idea prevailing in designs for mural decoration; to my mind this is somewhat on a par with the man who argues that, because there are many cases known of genius which has risen superior to physical disability, therefore physical disability is a sign of genius. You have only to examine early work to realise that the craftsman holds his story with all the skill of which he was possessed, and that his success is achieved in spite of and not because of his limitations as regards design. After all, there is nothing like severe limitations for killing off the man of mediocre skill and limited enthusiasm and bringing to the front the man of genius.—From a lecture on "Stained Glass," by Mr. Noel Heaton.

Democratic Architecture.

In order to meet the great need for a modern architecture permeated with the spirit of democracy and in keeping with the standard of life and aspiration of the people, architecture must become more socialised. Design and size should be subject to the analysis derived from a knowledge of conditions as they are, and a careful study of minimum standards, as they are possible under the modern economic systems, should be the foundation of all home building. If the prevailing needs of the modern wage earner's family can be met most adequately by a three-, four-, or five-room home, it is imperative that the design be so adapted as to give that ample elasticity and variety to the various types as will make them amenable to adjustment of grade, character of occupancy, materials, and other factors, and bring the best structures within the reach of the man for whom the home is intended. A design which is intended for one type of occupant, to find its best use in another type, is an architectural as well as a social failure, and a large share of our housing problem is caused by maladjustment of purpose in home-building. A lack of interest on the part of architects, due largely to economic reasons and to wholesale speculative building, has operated to prevent architects from turning their attention to the problem of simple, inexpensive houses, and they are hardly a factor at present to be reckoned with in the building of ordinary homes. That this has proven detrimental to the architectural progress of this age, and that it must be counted as a distinct social loss from the point of view of the homes of the bulk of our people, is generally conceded. From a paper on "The Architecture of the Garden City," by Dr. Aronsvlei, in the "Journal of the American Institute of Architects."

Tudor and Classic.

Of course, it may be, and often is, urged that the one style in these days is as unspontaneous as the other. Both of them, both the English style and the Roman, have been concocted in an architect's office, and are equally remote from real life. In part only is the objection true. It is true that both styles are in the present day artificial, but not true that both are equally remote from us. I will not attempt to fathom the causes of that sympathy which prevails between certain races and certain forms of building, but I venture to assert that no one has even approached the right and only fruitful way of studying architecture who has not realised the profound affinity, amounting, indeed, to an absolute identity in sentiment and feeling, which exists between racial character and the structural forms it has evolved. The evidences of this affinity are often curious and striking. The other day the present writer, visiting a country house lately built in the style we are speaking of, the old manorial style of the sixteenth century, was told by the owner's daughter, a child scarcely in her teens, that the reason she liked the house was that "it looked so English." Asked what made her think so, the child could only contemplate the house from the terrace where we stood, and confess that she did not know. She knew nothing about ways of building; she had never been told that it was English; but she added, none the less confidently, and, eyeing the broad mullioned windows with amiable sympathy, "It has that look, you know." Something in themselves, some latent racial instinct, will of its own accord identify the English style.—Mr. March Phillipps in the "Morning Post."

Architects and the Public.

We architects don't expect much sympathy from the general public, who, no doubt, in the main, agree with what a certain Welsh artist said recently: "Architecture does not exist, except as providing a roof for works of art."—Mr. Lanchester to the "South Wales Daily News."

Comfort for Borrowers.

If you deprive an artist of all he has borrowed from the experience of others the originality left will be but a twentieth part of him. Originality by itself cannot constitute a remarkable talent.—Wiertz.

INDIAN ART AT THE VICTORIA AND ALBERT MUSEUM.

The Board of Education announce that a loan exhibition of Indian paintings has been arranged in the Indian Section of the Victoria and Albert Museum (Lower Gallery, Room 4).

The exhibition consists of more than 200 characteristic works of the New Calcutta School, generously lent by the Indian Society of Oriental Art, Calcutta, together with examples by artists of the same school lent by Mr. Havell and Dr. Coomaraswamy. In addition, Her Majesty Queen Mary has been graciously pleased to lend an important example of the work of Abanindro Nath Tagore, for some time Principal of the Calcutta School of Art and one of the leaders in the movement. It depicts Tissarakshita, Queen to King Asoka, contemplating the destruction of his favourite Bodhi tree. All the paintings lent by the Indian Society of Calcutta were recently shown in Paris at the twenty-second exhibition of the Société des Peintres Orientalistes Français.

The New Calcutta School represents the development which has taken place in Indian Art since 1896, when Mr. E. B. Havell reorganised the instruction given in the Calcutta School of Art on Indian lines and brought together a representative collection of examples of Indian painting, sculpture, and architecture for the purpose.

In addition to works by Mr. Tagore, there are also included in the exhibition paintings by thirteen of his pupils, Nanda Lal Bose, the late S. N. Ganguly, and others, some of whom follow the traditional technique of Indian painters more closely than the rest. Two of them, Messrs. Ishwara Prasad and K. Venkatappa, are descended from families of hereditary court painters. Mr. Prasad, whose family were court painters to the Nawabs of Murshidabad, Bengal, in the eighteenth century, was discovered by Mr. Havell working as a designer in Manchester piece goods for a European firm in Calcutta. He is now a teacher in the Calcutta School of Art. Mr. Gogonendra Nath Tagore, a very gifted amateur, who contributes to the exhibition a series of illustrations of the life of Chaitanya and impressionist studies in the streets of Calcutta, has worked entirely under the tuition of Japanese artists.

The exhibition will remain open till the end of May.

REFORMING AN OBSOLETE WORKHOUSE : ARCHITECT'S REPORT.

At a meeting of the Honiton Board of Guardians a letter was received from the Local Government Board forwarding, for the Guardians' consideration, an extract from a report which the Board had received from their architect after a visit to the workhouse on January 20. The letter stated that the institution was one of the old types of mixed workhouses, dating from 1836, on the cruciform plan, all the buildings (except the men's sick ward, which was a later addition, 1868), the chapel, and the vagrants' wards being in one building. It was somewhat roughly constructed and in need of considerable repair and improvement. The roofs were defective and there was evidence of damp in most parts of the buildings. There did not appear to be any proper damp-course, and there was no evidence of ventilation or concrete under the floors, which were, however, in many cases, of solid formation. The sanitary arrangements were inadequate and somewhat defective. There was no adequate hot-water supply. The sick wards were very indifferent. Those for the females formed part of the front block, and consisted of a ward 36 ft. by 21 ft., on the ground floor, and a similar ward over it, with two small rooms adjoining for maternity cases. The male sick wards were in a detached block, and comprised two wards, 23 ft. by 20 ft. There were no day-rooms, no baths in connection with the sick wards, and no separation wards. The sanitary accommodation was not satisfactory, and there were no hospital sinks or modern conveniences. There was no duty-room for the nurses, and the fact that the wards for males and females were in different parts of the workhouse added somewhat to the nursing difficulties. The workhouse was altogether out of date and defective, and was not, in his opinion, suitable for modern requirements or worth the expenditure that would be necessary to put it in a proper state of repair. It was quite evident that no expenditure on the buildings themselves could bring them up to the modern standard required for buildings occupied by sick persons. The site was very limited in extent, comprising a little over an acre, about half of which was covered by workhouse buildings and yards, leaving only about half an acre for gardening purposes. It was clear that upon this site it was not possible to develop a hospital on modern lines, except by demolition of a large part of the existing buildings, and if the establishment of a poor-law hospital, exclusively for the Union, were necessary, the removal of a part of the workhouse would be the only alternative to the erection of a new hospital on a fresh site. Having regard to the small value of the buildings, he should have no hesitation in recommending their removal. The site itself, though awkward of shape, was not badly situated or unsuitable for the purpose of a hospital. It would, however, be impossible to retain an ordinary workhouse on this site if a new hospital were built, and, consequently, the problem seemed to be reduced to a choice between three courses—(1) the establishment of a poor-law hospital on the present site (the tramps might remain for the present); (2) the erection of a hospital on a separate site and the sale of the present site, or use for old and infirm inmates and tramps; (3) an arrangement with some adjoining union or unions for hospital purposes and the retention of the portions of the existing workhouse for old and infirm inmates and for tramps. Of these alternatives the last would probably be the most economical, both in capital expense, and if satisfactory arrangements could be made for the sick elsewhere he should recommend this course and the retention of only so much of the old workhouse buildings as were worth expenditure on such repairs and improvements as were necessary to make them suitable for inmates in health. It would be also necessary to provide suitable receiving wards for sick cases pending their removal.

A committee of the whole board recommended that (1) the board approach the owners of adjoining property as to whether they would dispose of a field containing 1.51 acres, and (2) call in an expert to advise as to the remodelling, reconstructing, and rebuilding of a workhouse.

Rebuilding seems to be essential.

NEW YORK'S GIGANTIC MUS

A notable contribution to the Cen
of Peace celebrations has been anno
in the form of a project for the est
ment in New York, at a total cost
tween four and five millions sterli
twenty separate museums to be kno
museums of the peaceful arts. It i
posed to group the museums aroun
centre, "preferably around a stadiu
will include a great covered enclosu
public meetings." An associatio
carrying out these objects has been
porated, and has already received pr
of gifts amounting to £300,000 towar
building fund.

The buildings, which will be of
and concrete, are expected to
together the largest museum in the
They will be devoted "to the housi
proper exposition of permanent exhi
the following branches, among oth
the industrial and peaceful arts: E
city, steam, astronomy, and navig
safety appliances, aviation, mech
arts, agriculture, mining, labour effic
historic records, health and hygien
tiles, ceramics and clays, archite
scenic embellishment, gardening,
and building materials, printing
books." A committee has been app
to report on the available sites.

A MUSEUM OF FURNITU

It will be remembered that, at th
when the Geffrye Almshouses, i
Kingsland Road, N., were threatene
demolition, the preservation of so in
ing an example of late seventeenth-c
building was warmly advocated i
Journal. The houses have now
adapted as the Geffrye Museum of
ture, which was opened last Thurs
Viscount Peel, Chairman of the L
County Council.

Sir Robert Geffrye, whose statue i
the entrance to the chapel of the old
ings, was Lord Mayor of London in
and left money for the provision and
tenance of almshouses for old pe
When put up these houses were q
the country, but in more recent tim
neighbourhood has altered beyond
nition, so that these relics are now in
ing contrast to the surrounding buil
The Ironmongers' Company, whic
charge of the Geffrye estate, though
the neighbourhood had become uns
for almshouses and removed the inm
a more rural locality, while their old
has been renovated and turned i
museum, illustrating the art of cabin
furniture-making, the local indust
which Shoreditch is famous, some ei
nine thousand persons in the district
engaged in it.

The bedroom flooring of the two-
buildings has been removed, leavin
the beams in position, and communi
has been made between the several h
so that there is now a continuous g
from end to end of the building. In
to supplement its own collection
Council has obtained on loan a con
able number of articles from the Vi
and Albert Museum, the City Corpor
and private individuals. The en
room is lined with a portion of the
ling from Bradmore House, Ha
smith, and among other exhibits a
eighteenth-century doorway from 5,
George Street, another doorway of
century earlier date from a hou

elydown Lane, a bedstead of the time
illiam and Mary, a set of Flemish oak
ers, decorated with linen pattern carv-
and retaining their wrought-iron
s; a deal mantelpiece decorated with
r in the Adam style; an oak trencher
dated 1648, and a chair made entirely
rned wood, with the exception of the
and the footrail. Tables and chairs
rious styles abound. Among the
ities is a desk, lent by Sir Laurence
ne, which once belonged to Oliver
well and was given by him to Sir Ber-
de Gomme, the famous military engi-
Two chairs, which were used for a
ed years in the dock of the Old
, are there, and in a corner may be
wo sections of the keel of the ancient
ip found at Woolwich. The museum
e open from three to nine o'clock on
ys, and from noon to nine o'clock on
days, except Mondays, when it will be
altogether.

nay be reasonably hoped, said Lord
that the museum will be not only a
to which those curious in the history
niture and cabinet-making will come,
at it will be also a source of stimulus
ggestion to those engaged as crafts-
those trades.

TCH CLUB FOR THE DECOR- TIVE AND KINDRED ARTS.

editor of "The Decorator" has sent
following details of a scheme for a
ed new sketch club:

believed that there are a very large
r of artists and designers in the
of large decorative and furnishing
, or connected with architecture and
dred arts, who would welcome an
unity of exhibiting their individual
including holiday and other sketches,
te designs etc., at a public exhibi-
which might be held in the spring,
n, and winter at a suitable art gal-
London.

exhibit would include painting in
d water colours, designs for interior
her decoration, architectural draw-
ook illustrations, posters and artistic
sements, photographs, and craft
generally. The club would, there-
e of interest to a large circle.

not contemplated that it would be
le at first to take regular club pre-
but there would be little difficulty in
ng for a meeting place which should
ays available. If the membership
l sufficiently high numbers, the fol-
developments are suggested, and
y others would be added from time
as the plan grew: A Saturday after-
ketch club in the summer to places
easy reach of town and, in the
drawing from life once a week,
quent opportunities for social inter-

ar societies are at present success-
n by various bodies, not directly
ted with the arts. Surely it is not
bitious to suppose that a similar
of designers and decorators would
r a very great deal of talent amongst
nbers, and that successful and in-
g exhibitions could be held from
time.

ubscription would be a very modest
ly sufficient to defray actual out-of-
expenses. The suggestion has been
y Mr. Bertram Puckle, who has had
rable experience of similar societies
ture exhibitions generally.

"The Decorator") have pleasure in
our columns at the disposal of
ho seek to encourage the scheme, and are willing to publish the announcements as to time and place of meetings, etc., and generally to promote its interests. We trust to receive the co-operation of the architectural and art press in furthering the scheme.

In order to ascertain the support forthcoming, it is proposed to call a meeting at an early date, and there is every reason to believe that it will be well attended. At this meeting the whole matter, with its several details, will be discussed, and, if approved, a president and officers will be elected and members enrolled with a view of holding a first exhibition before the summer.

Those interested are invited to at once send their names to the editor of "The Decorator," 365, Birkbeck Bank Chambers, High Holborn, London, W.C., when they will be informed as to further developments, and will, in due course, receive an invitation to a preliminary meeting. It need hardly be added that those sending in their names are under no obligation of any kind.

NEWS ITEMS.

County Secondary School, Kentish Town.

The new County Secondary School in Highgate Road, Kentish Town, which was opened last week, is for 450 girls, and includes an assembly hall and gymnasium, eighteen class-rooms, an art room, a library, laboratories, dining-hall, kitchen, cookery class-room, etc. The cost is about £25,000. Mr. W. E. Riley, F.R.I.B.A., is the architect, and the builders are Messrs. McLoughlin and Harvey.

The Cost of the New Delhi.

The Government of India have submitted to the King a special report on the progress of the New Delhi scheme. In this report it is estimated that the entire cost will be something like £6,000,000 sterling. The estimated cost of the Government buildings amounts to £2,800,000, which represents the estimated cost of certain Government buildings only. The estimate is, however, still under consideration.

The Old Houses in Cloth Fair.

At a meeting of the Court of Common Council at the City of London Guildhall, the Sanitary Committee of the Corporation submitted the report of the Medical Officer of Health on the preparation of a scheme for the sanitary improvement of a certain area in Cloth Fair, and submitting for adoption an arrangement for acquiring the premises No. 24 (formerly the "Dick Whittington" public-house) and the site of No. 25, Cloth Fair, for the sum of £1,300. Mr. Deputy Ellis said the "Dick Whittington" was a fifteenth century public-house. The Charity Commissioners had in hand £1,300 derived from property belonging to St. Sepulchre's, Holborn, and had earmarked it for a scheme for founding an institute for Smithfield Market porters. He suggested that the money might be devoted to the preservation of the "Dick Whittington" premises, and that the building might be utilised for the purposes of the proposed institute. After a brief discussion the proposal to acquire the "Dick Whittington" premises and the site of No. 25, Cloth Fair, was agreed to.

Housing Points.

At a meeting of Holmfirth U.D.C., Councillor G. H. Tinker presented in some detail a report of the recent town-planning and housing conference at Liverpool. He said in the exhibition there was an entire absence of terraces and long rows of houses. Standardisation of doors and windows was one of the points recommended. Speakers at the conference recommended larger living rooms and smaller sculleries, so that the latter should not provide a living room—which was not a desirable use for it. The rooms should be 8½ ft. or 9 ft. and the houses should be from 26 to 30 to the acre.

Another Strand Widening Scheme.

The Improvements Committee of the London County Council recommend the acquisition of a strip of land belonging to the Duchy of Lancaster for the purpose of widening to 80 ft. the Strand between Savoy Street and Terry's Theatre. The Committee state that terms have provisionally been arranged with the Duchy for the purchase of the freehold for the sum of £13,000, and are advised that it should be possible to acquire the bulk of the interests for about £65,000. It is anticipated that the Westminster City Council, as in the case of previous widenings, will contribute one-sixth of the net cost.

£1,250,000 Bridge for the Ganges.

At their Crown Bridge Works, West Bromwich, Staffordshire, Messrs. Braithwaite and Kirk are now building an enormous bridge for the Indian State Railways to span the Lower Ganges. The total cost, including the foundations, will be about a million and a quarter sterling. The structure will carry the Eastern Bengal Railway across the Lower Ganges at a point 120 miles above Calcutta, connecting Damukdia and Sara Ghat, between which places traffic has hitherto been conveyed by paddle ferry. In addition to two approach spans 75 ft. in length, there are fifteen main spans, each 345 ft. 1½ in. in length. The bridge carries a double track of railway, 5 ft. 6 in. gauge.

Ancient Monuments in the North.

At a meeting of the Royal Commission on Ancient Monuments held in Edinburgh last week, Sir Herbert Maxwell, Bart., the chairman, presiding, it was reported that the fifth report of the Commission and inventory of monuments in the Stewartry of Kirkcudbright had now been published, and that the revised issue of the Berwickwickshire inventory would be ready in the course of the summer. The survey of archæological remains in the Western Isles was now about to begin and the architectural structures of Mid-Lothian would also be surveyed this summer. Several reports and other communications were submitted and dealt with regarding various ancient monuments coming under the scope of the Commission.

New Harrods' Store in Buenos Aires.

Cables have been received from Buenos Aires giving particulars of the successful inauguration there of the new Harrods' Store, which opened its doors for business last week, so far as the ground floor and first floor are concerned. The second and third floors are expected to be ready in September next. The building operations have been carried out with wonderful speed, since excavations were only started on August 8 last, and 15,000 yards of earth were taken out in the two following months. It has a frontage of 172 ft. by 180 ft. deep, and each floor is of this size, without any divisional walls, making it the largest-spaced departmental store in South America. The ceiling decorations are in Louis XIV. and Louis XV. designs, and the fixtures and fittings of mahogany inlaid with sandalwood.

TRADE AND CRAFT.

Messrs. E. Pollard and Co.'s New Premises.

MESSRS. POLLARD AND CO.'S NEW PREMISES: CENTRAL SHOP.

Within recent years the building industry has seen some extraordinary changes both with regard to material and construction; but, in what may be termed its complementary branches, nothing has been more remarkable than the development of the shop front. Time was when the builder simply fixed up his framework with its wood fascia and stall-board, filled the intervening area with large or small sheets of plate glass, and retired well satisfied with his work. All this has now been altered.

The enterprising tradesman has realised the financial value of an attractive exterior, and the designer, often an architect, has been called in, whose endeavour has been to invest the shop front with some degree of architectural character.

The result is that the shop fronts of our thoroughfares are everywhere taking on a far more attractive appearance, some very excellent effects having been achieved with wood, brass, bronze, copper, gun-metal, etc. The stimulus that the industry has thus received has been very considerable, and at least one large firm of shop-front manufacturers—Messrs. E. Pollard and Co., Ltd.—have found it necessary to open new and extensive premises in order to cope with the constantly increasing volume of business. These premises, said to form the largest shop-fitting factory in the kingdom, are situated in Aylesbury Street, close to the old works in Clerkenwell Road, which still remain open. They comprise a basement, ground, mazzanine, and first floors, giving accommodation for a large clerical staff, about 600 mechanics, and for all the machinery involved in the manufacture of shop fronts and accessory fittings.

The premises are very systematically planned, all the shops being arranged so that a job may proceed from one to another as the work advances without any waste of time or effort. The departments are numbered alphabetically throughout, beginning with the works manager, who receives and is responsible for the execution of all jobs.

An important feature of the plan is the mezzanine floor—a spacious, rectangular top-lighted compartment in the centre of the building, in which a large quantity of wood-working machinery is accommodated. A view of this floor is shown in one of the accompanying illustrations. All the various subsidiary shops are grouped around in systematic arrangement, each being easily accessible to the other.

Every operation in connection with the making of shop fronts and the many internal shop fixtures, such as cabinets, counters, wall cases, etc., for which Messrs. Pollard have established a considerable reputation, is performed by machinery, of which, as may be judged, there is a fine complete installation, the whole being electrically operated.

The visitor to Messrs. Pollard's premises is immediately struck by the almost complete absence of shavings in the workshops. This apparent phenomenon is explained by the fact that to every piece of machinery a duct is affixed down which the shavings are drawn by powerful suction to the basement level, where they are consumed in a furnace. By this ingenious arrangement, not only are the workshops kept free from litter, but the risk of fi
very considerably reduced, if not
gether eliminated.

Large stocks of wood and metal are
stantly kept on the premises, where e
process involved in the manufactur
shop fronts and fixtures—from w
working to brass-polishing—is exec
and finished. Messrs. Pollard are th
fore in a position to carry out any con
no matter what its size with the ut
economy and despatch. Architects
others who are interested in this cla
work are cordially invited by the fir
make a personal inspection of
premises.

MESSRS. POLLARD AND CO.'S NEW PREMISES: SHOW-CASE-MAKING SHOP.

Boilers for Steam Heating Plant.

Small, medium-size, and large bo
are described and illustrated in a seri
leaflets received from Messrs. J. an
Grevener, 40, Southwark Street, Lon
S.E., who are the sole agents for
manufacturers, the Buderus Iron W
Wetzlar. These boilers are of the
known as the "Lollar," and the ad
tages claimed for them are—extreme
plicity of construction and erection, th
most economy of fuel consumption, hi
efficiency, superior rapiditv of heating
slow and perfect combustion, great
bility, and the ease with which they
be cleaned.

The Lollar small boiler is intende
heating small buildings, such as villas
cottages, hot-houses, garages, etc., an
hot-water supply. The boiler is ca
one piece, its base serving as the as
By the provision of corrugated walls
in the boiler a very large and effe
heating surface, in contact with the fi
obtained, and, by a special arrangen
the smoke emanations are so fully uti
as greatly to increase the economy o
boiler. The grate is removable, and
draught is controlled by means of a
The small boilers are made in several
As tested by Professor Roessler, of
Grand-Ducal College of Enginee
Darmstadt, these boilers showed an e
ordinarily high degree of efficiency.

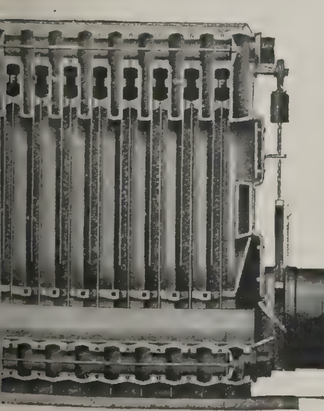
The Lollar Middle Boiler is constru
in ten different sizes, ranging from s
fifteen sections, corresponding to a hea
area from 99 to 270 sq. ft. The boil
constructed in two halves, each half

g individual half-sections, which fol- he counter-current principle. The cast in one piece with the sections, is cooled, and therefore not subject to g or rapid wear. An improved sup- secondary air produces instant com- n of the gases collecting above the A sheet-metal shell, thickly lined raided silk, insulates the heat.

cast-iron counter-current sectional standard Boilers are made of tough of special iron, and, the heating sur- being in contact with water, the is ensured an extremely long life, he sections are of such a shape as n, when assembled, passages through the gases are drawn off. No bed- nor refractory-brick foundation is ed for this boiler. Every boiler, on tion, is subjected to a pressure of all the sections having been pre- tested to 90 lb. Two important s are (1) the small water content sections, giving speedy heating re- nd (2) large coke space, giving long s of burning, with very little attend-

large Lollar boiler is characterised dy portability, simple and easy set- mpactness, shapely form, and inde- ce of all brickwork. It is capable ing large buildings, although it oc- but little space, and it embodies a r of valuable improvements. It is n ten different sizes, the heating sur- rying from 172 to 415 sq. ft., and tions may be easily taken out sepa- or repair or to reduce heating capa- further sections may be as easily

T VIEW OF "LOLLAR" BOILER: MIDDLE SIZE.



ITUDINAL SECTION THROUGH OLLAR" STANDARD BOILER.

SPECIAL LEGAL REPORTS.

Building of the New Strand Hotel: Light and Air Dispute.

Cope v. J. Lyons and Co.

April 3. Chancery Division. Before Mr. Justice Astbury.

This was an action in respect of ancient lights brought against Messrs. J. Lyons and Co. by Mr. Frank Trew Cope, of 4, Northumberland Street, Strand, seeking relief from a threatened loss of light through the erection of a restaurant or hotel the defendants are building near the Charing Cross Hotel.

Counsel for the plaintiff were Mr. Frank Russell, K.C., and Mr. Joseph Tanner, and for the defendants Mr. Younger, K.C., and Mr. Sheldon.

Defendants denied liability and asserted that, by their improvement, the plaintiff would have more light than before.

Mr. Russell explained that in the narrow slope of Craven Street, running down from the Strand to the Embankment, defendants had acquired buildings. They had secured 9 and 10, Strand, and 1, 2, 3, 4, 5, 6, and 7, Craven Street. At 4, Northumberland Street, at the rear, Mr. Cope was a foreign and colonial agent carrying on business on the ground floor, and he let the two floors above to his sisters. The light came to the back of his house through a deep well made by the backs in question, and the erection of a higher building by Messrs. Lyons would be like putting a lid on the top of the well. Not only were Messrs. Lyons taking their building to an enormous height, they were bringing forward the line of the main buildings overlooking the plaintiff six feet. They were, however, putting back three or four feet a line of jutting-out outbuildings. On the eastern side of the plaintiff's premises were eleven windows and a skylight abutting on 7, Craven Street, and, insufficiently lighted as the lower windows now were, the rooms with the new buildings would be converted into something like coal cellars. At one point there was a suggestion that the defendants were creating a gap between two buildings, a slit through which a certain increase of light would come, but with that promise of increase of light they were not likely to be greatly impressed.

Mr. Herbert Phillips Fletcher, F.R.I.B.A., F.S.I., A.M.I.C.E., said that at one point the new building represented a loss of 15½ degrees. He put the loss on the letting value of the plaintiff's house at £50 and capitalised it at £1,000. The increase of light at a narrow slit of 8 ft. or 10 ft. did not compensate for direct light lost elsewhere. No substantial amount of direct light could come through a slit. The new building would make the plaintiff's office unusable except by artificial light.

Cross-examined: He admitted that if the defendants put back five or six feet a line representing outbuildings going up 28 ft. 9 in. (though he did not admit that measurement), there might be more diffused light supposing the new building went no higher than 29 ft. 3 in. But this was coming forward as to the main line. He understood the house was sold in 1907 for £4,000 on account of the bad light, and he knew the defendants were going to face all the buildings with white tiles. That did not alter his opinion as to diminished light and depreciated letting value.

Sir A. Brumwell Thomas, F.R.I.B.A., sometime member of the Council of the Institute of British Architects, and past Vice-President of the Architectural Association, gave corroborative evidence. He considered, he said, the width of this court of paramount importance for the plaintiff's office and other windows. Glazed bricks could not give adequate value for what had been taken away.

The plaintiff having given evidence, the parties reached a settlement on the terms that a sum was to be paid the plaintiff in respect of his costs and he was to be at liberty to carry his building to a height equivalent to that of the defendants' premises.

Disputed Builder's Contract.

Butt v. McDiarmid.

April 7. Official Referee's Court. Before Mr. Muir Mackenzie.

This was an action for work done in which Mr. Albert William Butt, a builder, was the plaintiff, and Mr. Arthur Hallam McDiarmid, a solicitor, carrying on business in London and having a private residence at Bury, in Sussex, known as the Manor House, was the defendant.

Mr. Jas. Scarlett and Mr. Lawrence Mead were counsel for the plaintiff, and Mr. Johnston Edwards for the defendant.

The hearing occupied ten days, and amongst the witnesses for the plaintiff were Mr. James William Stonhold, A.R.I.B.A., and Mr. Heveningham, of Arundel, surveyor to the Duke of Norfolk, and for the defence, Mr. Milne, A.S.I., gave evidence.

From Mr. Scarlett's opening statement it appeared that on and between January, 1911, and May, 1912, the defendant employed the plaintiff to do certain work and supply materials in respect of numerous alterations, additions, and decorations at the Manor House. The work was carried out, and the plaintiff in or about December, 1912, rendered to the defendant an account of his charge, amounting to £1,874 6s. 7½d. The defendant, while the work was in progress, paid the plaintiff on account various sums of money amounting to £844 1s. 2d., for which credit was given, leaving £1,030 5s. 5½d. as the balance which the plaintiff now sought to recover. The instructions under which the work was done were mostly oral, given either at the Manor House or at the defendant's office in the City. In the case of some of the oral contracts confirmation, said counsel, would be found in the correspondence which had passed between the parties. When the defendant denied that instructions were given the plaintiff relied on the fact that the doing of the work and the supply of the materials was necessary to carry out the scheme of the defendant in preserving the Manor House as an old country mansion and in properly carrying out the general instructions given by the defendant as to the work, and further, that the defendant accepted the work and materials and approved of them, retaining the use of them. The letters were, said counsel, very numerous and referred to the various details of the work from time to time. In addition to the work contracted for originally, there were many extras, including new ceilings, fixing rotary pump, and an additional floor of rooms. It was said that a contract for £80 included this latter item, but as a matter of fact the materials and labour for the work would be something like £217. Further, the £80 contract was not adhered to owing to the many additions and alterations which the defendant required to be made.

Mr. Muir Mackenzie, in giving judgment, said that the defendant set up, as to a large portion of the work in respect of which the claim was made, that it came under oral contracts, by which the plaintiff undertook to do the work for fixed sums which the defendant alleged he had already paid. The defendant further said that the amounts paid were more than sufficient to cover the extra work done. The burden of proof was, technically, upon the defendant, and he (the Referee) considered it his duty to decide that the defendant had not satisfied him that the two parties on any one of the occasions made complete oral agreements. The question next arising was, what was the sum to be paid to the plaintiff for his services and disbursements? He was entitled to be paid a fair and reasonable value for the work done, but as to that the expert witnesses called on the one side and the other had differed materially and. therefore, afforded him but little help in forming a conclusion. He had, however, some data upon which he could act. It appeared that the plaintiff was at work during sixty weeks, and there were documents showing the amounts for which he (plaintiff) was willing to do certain parts of the work. And there was evidence as to the amount he had paid away in wages. Upon the whole of the facts he came to the conclusion that the plaintiff's claim was exaggerated, while some items charged were inadmissible. On the other hand the fair and reasonable value of the plaintiff's work came to more than the defendant had paid on account. Taking all the facts into consideration he had come to the conclusion that £1,089 was a fair amount for plaintiff to charge, and of that amount the defendant had already paid £739, leaving £350 as the amount for which plaintiff would get judgment.

Judgment was accordingly entered for plaintiff for £350, with costs.

A stay of execution was asked for and granted on the usual undertakings.

PROJECTED NEW WORKS.

United Methodist Church, Elland.

At Elland a new United Methodist church is to be erected at a cost of about £3,500.

Swimming Ponds, Dumfries.

Swimming ponds are to be erected at Dumfries at a cost of £4,000 by the Dumfries and Maxwell Town Council.

Church, Folkestone.

Plans have been prepared for the rebuilding and enlargement of Folkestone Primitive Methodist Church. The cost will be £1,500.

Garden Village, Wrexham.

As the commencement of a garden village to be established near Wrexham, arrangements are being made for the erection of 200 cottages.

School, Gourock.

The Gourock School Board are negotiating for a site in the Cardwell Bay district as a new school will shortly require to be erected in that district.

Housing, Irvine.

The Irvine Town Council have decided unanimously to erect houses for the working classes in the town owing to the sudden and enormously increased population.

Drill-hall, Neilston.

A new drill-hall is to be erected at Neilston for the Renfrewshire Territorial Association. The Port Glasgow Drill-hall is also to be enlarged by the same association.

Fire Station, Glasgow.

Plans are being prepared by the City Engineer for a new southern fire station in Glasgow. A new hall is also to be erected by the corporation at Bridgeton Cross, Glasgow.

Church, Dunfermline.

An acre and a quarter of ground has been granted to the Dunfermline Presbytery at the village which has sprung up at Blairhall Colliery, for the purpose of erecting a church, church-hall, and manse (vicarage).

School, Glasgow.

A new school is to be erected at the corner of Hathaway Street and Shakespeare Street by Messrs. McWhannell, Rogerson, and Reid, architects, Glasgow, for the Glasgow School Board.

Extension, Derby Free Library.

In addition to a scheme for the provision of two branch libraries, for which a gift of £10,000 has been promised by the Carnegie Trust, the Derby Corporation has in hand a project for the extension of the present Free Library and Art Gallery. The cost of the scheme, which incidentally will assist in the process of widening the Wardwick, is estimated at £6,000.

Schools, Chasetown, Warwickshire.

Tenders have been accepted by the managers for the new schools, which are to be built from designs by Messrs. Harrison and Cox, architects, of Birmingham, to take the place of the former church used as a school, and now condemned by the Board of Education for teaching purposes. The new schools will accommodate 185 scholars.

Housing, Walsall.

The Walsall surveyor and Walsall doctor having reported to the Health Committee upon the types of working-class houses they have inspected in several towns, the surveyor has been instructed to prepare a scheme for seventy-five houses at 3s. 6d. per week, and fifty houses at 5s. per week, making up the 125 houses mentioned in the resolution passed by the Council in February, that the houses at 3s. 6d. per week be provided in Birchills, Wisemore, and Paddock districts, and that the Town Clerk take steps to advertise for sites.

Buildings, Aberdeen.

Plans of the following buildings have been approved by the Plans Committee of the Aberdeen Town Council: Dwelling-house on the south side of Rubislaw Den South, at its junction with Bayview Road, per Messrs. D. and J. R. M'Millan; garage at rear of No. 447, Great Western Road, per Messrs. Wilson and Walker; alterations and additions in connection with the premises, No. 20, Broad Street, per Mr. A. H. L. Mackinnon; addition to Spring Garden Provision Works, South Esplanade East, per Mr. George Coutts, architect; alterations Nos. 52-8, George Street, per Mr. W. E. Gauld. The names given are those of the architects.

A Correction.

In an article entitled "The Architect and Domestic Problems," dealing with a paper read before the Institute of Sanitary Engineers, which appeared in our last issue, the author of the paper was referred to as *Mr.* Cloudesley Brereton. It should have been *Mrs.* Cloudesley Brereton.

COMPETITIONS.

Board of Trade Competition.

Last week we published, with speci servation as to its authenticity, an u cial list of the ten architects select compete in the final of this compet We have reason for thinking that th sent us contained more than one in racy; we believe, for example, tha firm of Messrs. Ivor Jones and Thomas, of Cardiff, should have bee cluded, involving the displacement c of the firms given. Pending the o announcement, however, we cannot for this or other emendations.

Cottage Homes Scheme, Conwa

The Board of Guardians of C Union invite schemes, with plans f laying out of a plot of land near C r the provision of one receiving and four cottage homes, and for layin the remainder of the plot for cottage homes, recreation gro etc. For the second and best plan schemes prizes of £10 and £5 are of Apply to J. W. Post, Clerk to the dians, Union Offices, Conway.

The Mill Hill School Competiti

Members and Licentiates of the Institute of British Architects are w that they must not take part in the competition, because the condition not in accordance with the published lations of the Royal Institute for arc tural competitions.

THE LONDON LOCK-OU

The London Master Builders' As tion decided, at a meeting held on A "That the National Board of Conci be informed that, whilst this asso remains of the opinion that a mo penalty affords the most satisf guarantee for the due observance of ing rule agreements, the associati willing that the principle of their tion (clause 1) should be put to th as a substitute for such monetary g tee, subject to the following cond viz.:

"(1) The reinstatement of the w rule agreements which had been so re entered into, and subject to their re ing in force for a fixed period of four and the bringing into conformity wit working rule agreements any rules operatives' unions which may be i flict therewith.

"(2) The infliction of an adequate tary penalty by the executive o member of an operatives' union wh have committed any breach of the working rules, and the dismissal office of any official who may have or condoned any such breach, a peaceful working by members of the tives' unions on their returning to with all workmen who may then gaged, or who may have been em during a trade dispute.

"(3) That there shall be no tick spection in any shop or upon any jo no blacklisting of any member L.M.B.A., or any association af thereto.

"Subject to the acceptance of th going proposals, the council o L.M.B.A. will take steps to amend it to provide for the infliction of a mo penalty upon any of its members wh commit any breach of the workin agreements."

The unions have rejected these pro

Glidden

PRODUCTS for the DAMP-PROOFING & DECORATION of CONCRETE & CEMENT

LIQUID CEMENT COATING: CONCRETE FLOOR DRESSING: TRANSPARENT WATERPROOFING

New Premises of the Sheffield and Ecclesall Co-operative Society.
Architect, W. S. Patterson, Esq.

Glidden's Liquid Cement Coating

for the treatment of Concrete, Cement-Stucco, Brick or Stone. Dries with a flat, stone-like surface. Can be applied to NEW PORTLAND CEMENT; will not discolour or peel. Fills the surface pores, preventing penetration of water.

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binds the Sand and Cement together, preventing "Dusting" up. Fills surface voids, making the floor proof against penetration of Oils, Grease, Petrol, Water, &c. Dries with extremely hard tile-like surface which is easily kept clean.

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for Damp-proofing exterior walls of Concrete, Cement, Brick or Stone. Does not alter the colour or texture of surface treated. Permanently prevents penetration of Driving Rains, &c. Unaffected by severe atmospheric conditions. Very moderate in cost. Great covering capacity.

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ELECTRICAL NOTES.

The "Electricians' Strike."

There have been a large number of paragraphs in the daily papers regarding the present disturbance in the electrical wiring trade, but the situation has not been made very clear to the public or to those who are not in immediate contact with the wiring contractors. The dispute has been a long time coming to a head, and there has been much friction, brought about partly by the fact that there was no representative body of masters to meet the men and that the Electrical Trades Union is not a very powerful organisation and wishes to justify its existence. The masters issued one set of rules and the union issued another set and wished their rules to form the ultimatum to which the masters must agree. At a meeting called by the masters some time ago, at which it was proposed that a committee of masters and men should be formed and the union ignored, the officials of the union mustered in such force that the proposal was negatived and the masters were obliged to accept a resolution that they should meet the union officials. Negotiations took place, but eventually broke down, and the men went out on April 1, a very appropriate date considering the smallness of the points in dispute.

The Cause of the Trouble.

Of course, the fundamental cause of the trouble was the same as that which has caused the epidemic of strikes in other trades—namely, the increased cost of living and the erroneous belief that if the worker gets more pay for his work the price of commodities will oblige him by remaining stationary. Coupled with this was the moving force which impels trade unions to agitate, consisting of two components—pressure by certain of the men who are never satisfied, and fear on the part of the union officials that if they do not do something to justify their pay they will be moved on. Of course, nothing will prove to the men that the higher price of everything is partly due to the increased wages which have been given under pressure all round during the last few years, because the manufacturer and the middlemen will always put the increase on to the shoulders of the purchaser, so that in the end the working classes are no better off.

The Non-unionist Bogey.

In the present instance, as in most others, there is very little in dispute so far as wages are concerned, but the bogey of the non-union man has, of course, been introduced, probably as something to bargain with. Of this it can be said that the masters will on no account budge from their claim to employ whom they like. As a matter of fact, the number of competent wiremen outside the union is much greater than that of those who are members, and so the demand of the union is absolutely untenable until they have succeeded in reversing this state of affairs. The "free" labour wireman is, however, a very superior kind of mechanic, a steady-going unobtrusive person who is generally fairly well educated, and he is the last kind of man to take part in agitations which are generally organised by the less competent workers in every trade, who wish their earnings to be levelled up to those of their more efficient brethren. The main demand has been that a minimum wage of 11d. per hour should be paid to electrical fitters and wiremen. The masters me
by offering 10d. per hour from the
pay day in April to the first pay da
July, and after that 10½d. The men
asked for a working week of fifty h
whilst the masters countered by offeri
working week of fifty-three
maximum.

Pipe-fitters and Wiremen.

Another point of dispute is that men
ployed solely on conduit work are n
be considered wiremen by the masters
pipe-fitters, and paid 9d. as such.
matter of fact, this rule has actually
in existence or acknowledged for
time, but the men fear that the logical
clusion of making it official would be
about 70 per cent. of them would be
placed. This is, no doubt, a great
geration, but there is no reason wh
agreement could not be arrived at on
point as well as on the questio
wages. The union has, apparently,
managed the affair very badly, and
seems to be recognised by a resol
which it passed on March 29 to
effect that firms may continue to work
will concede 10½d. per hour as from A
and any further advance that ma
secured—also, if they recognise tha
erection of conduits is electricians'
Nevertheless, the strike began on Ap
but has turned out a very poor affair
it is not thought that it will last long.
dentally, an attempt was made to dr
the Association of Electrical Station
neers, but this has completely failed.
secretary has written that the membe
his association are certain that they
better the salaries, etc., by methods
more peaceful character.

To Architects and Builders——

You are interested in rendering your building fireproof. Is it not one of the chief points to which you give attention? It is as important that care should be exercised over the electrical installation from this point of view as it is in the construction of the building itself. The unqualified testimony of the majority of the leading fire insurance experts shows that under almost all conditions the Simplex Steel Conduit System is the best that it is possible to adopt for electric light and power wiring. During the course of the last fifteen years this system has been brought to a perfection of standardisation and simplicity, which not only renders it best from a protective point of view, but also the most easily adaptable to all classes of work. Our qualified engineers will always be pleased to wait upon you to give you such information as you may require in connection with the electrical work on your new building.

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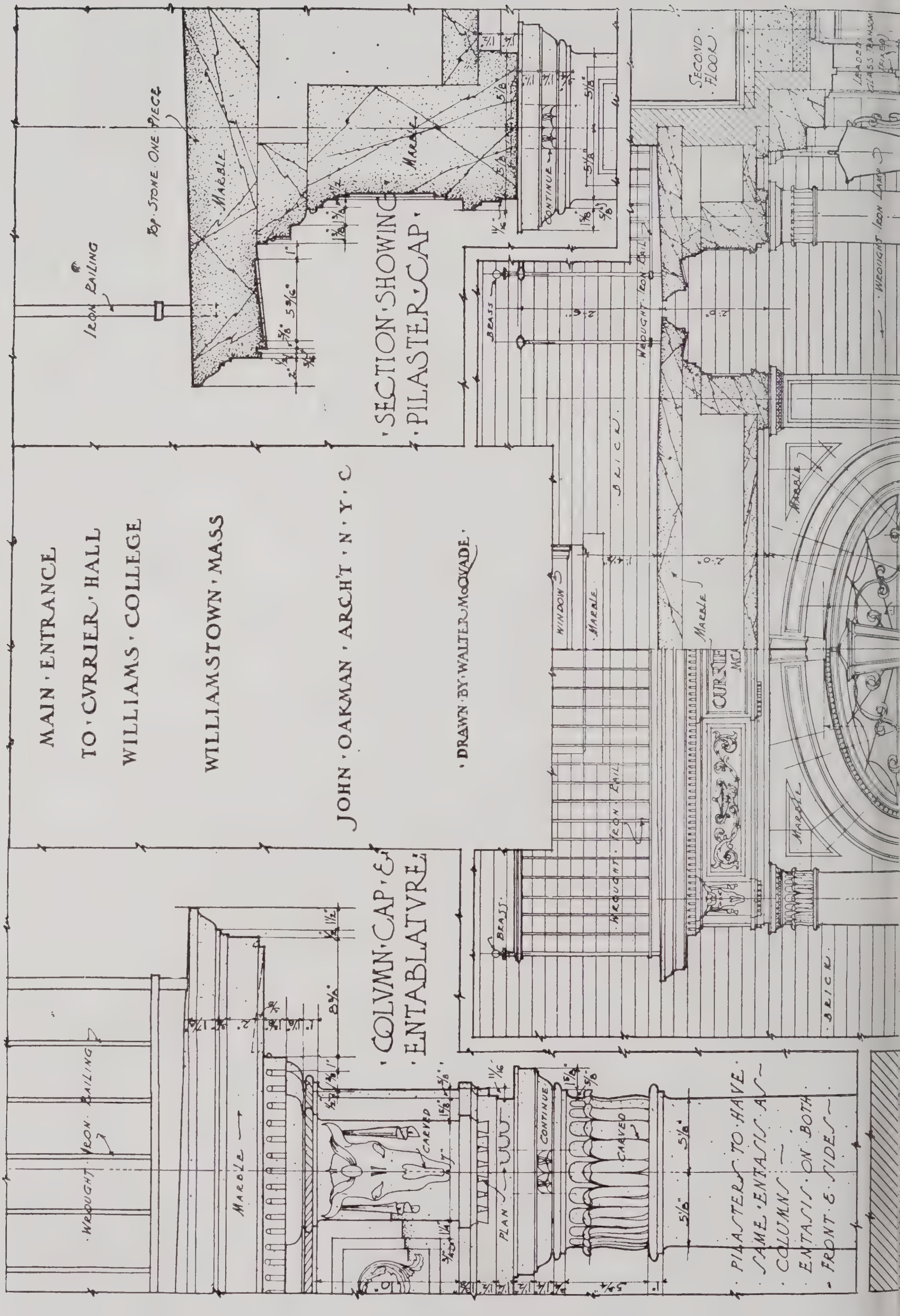
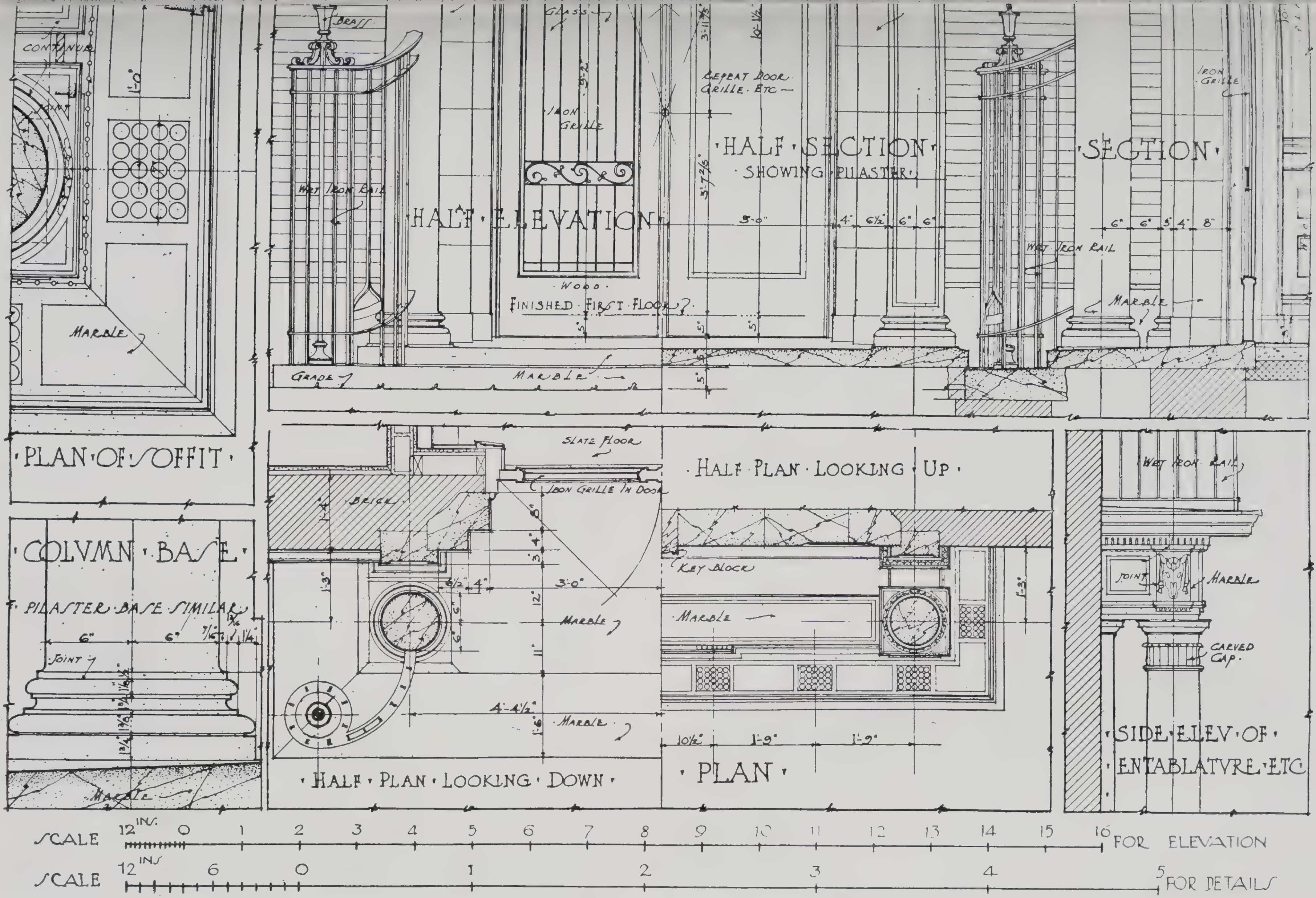


MAIN · ENTRANCE
TO · CVRRIER · HALL
WILLIAMS · COLLEGE
WILLIAMSTOWN · MASS

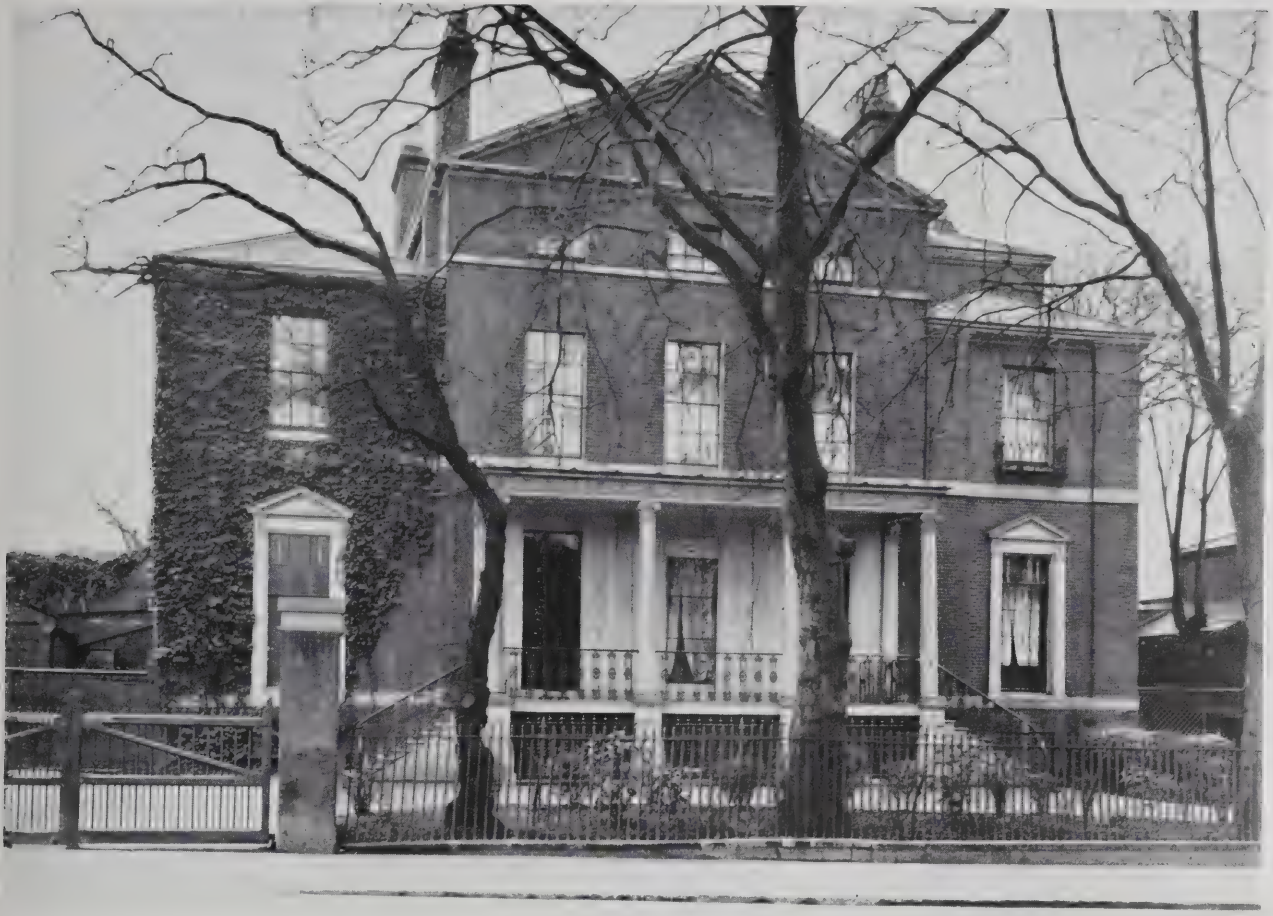
JOHN · OAKMAN · ARCH'T · N · Y · C

· DRAWN · BY · WALTER · McQVADE ·

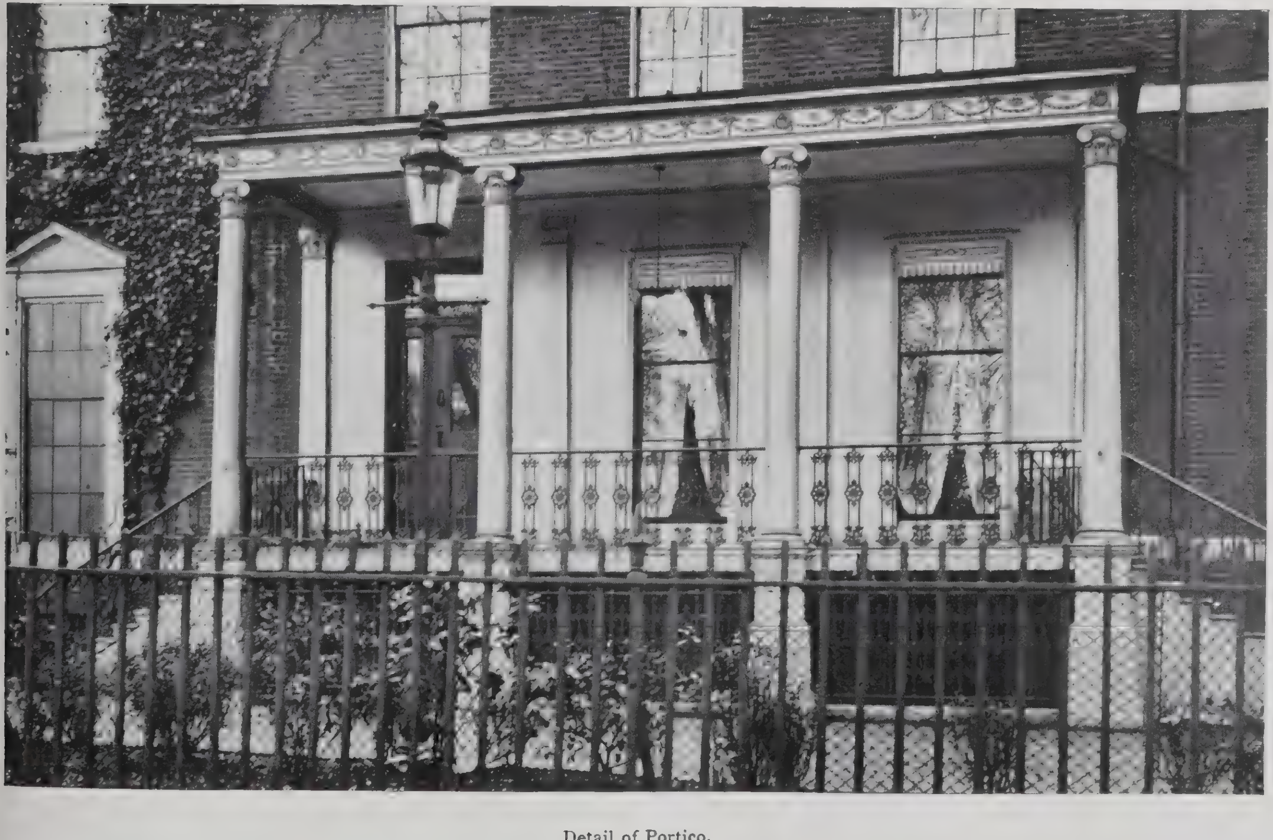

HALF · ELEVATION
HALF · SECTION · SHOWING · PILASTER
SECTION
PLAN · OF · SOFFIT
COLUMN · BASE
PILASTER · BASE · SIMILAR
HALF · PLAN · LOOKING · UP
HALF · PLAN · LOOKING · DOWN
PLAN
SIDE · ELEV · OF · ENTABLATURE · ETC
BRASS
GLASS
IRON GRILLE
WRT IRON RAIL
REPEAT DOOR GRILLE · ETC —
WOOD
FINISHED · FIRST · FLOOR
MARBLE
GRADE
SLATE FLOOR
IRON GRILLE IN DOOR
BRICK
KEY BLOCK
JOINT
CARVED CAP
CONTINUE
3'-0"
4'-4½"
5'-0"
1'-9"
10½"
SCALE 12 INS. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 FOR ELEVATION
SCALE 12 INS 6 0 1 2 3 4 5 FOR DETAILS

WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XXI.—MAIN ENTRANCE TO CURRIER HALL, WILLIAMS COLLEGE, WILLIAMSTOWN, MASS.

JOHN OAKMAN, ARCHITECT.

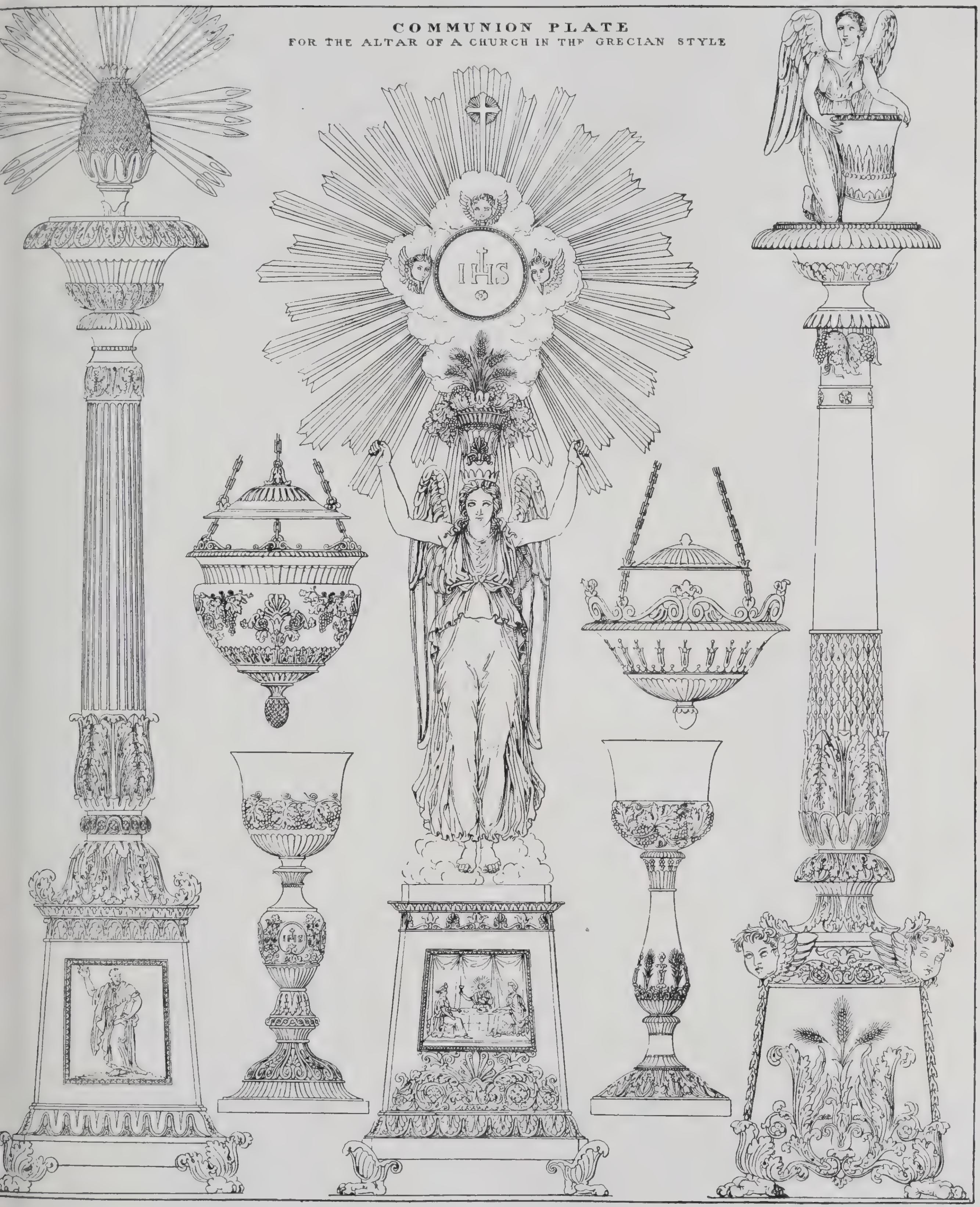


General View from Roadway.

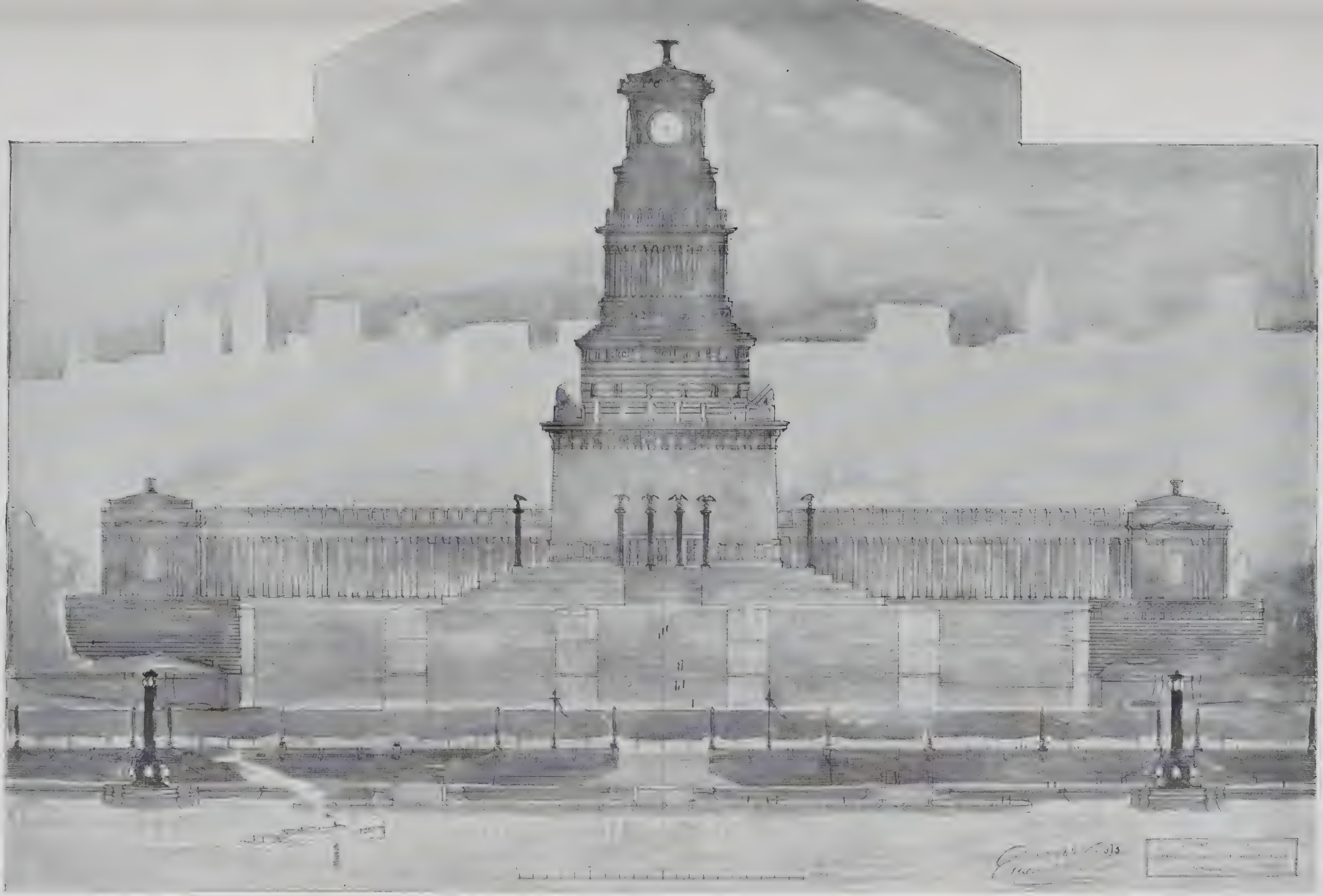


Detail of Portico.

SMALL HOUSES OF THE LATE GEORGIAN PERIOD. IV.—SURREY LODGE, DENMARK HILL, LONDON, S.E.

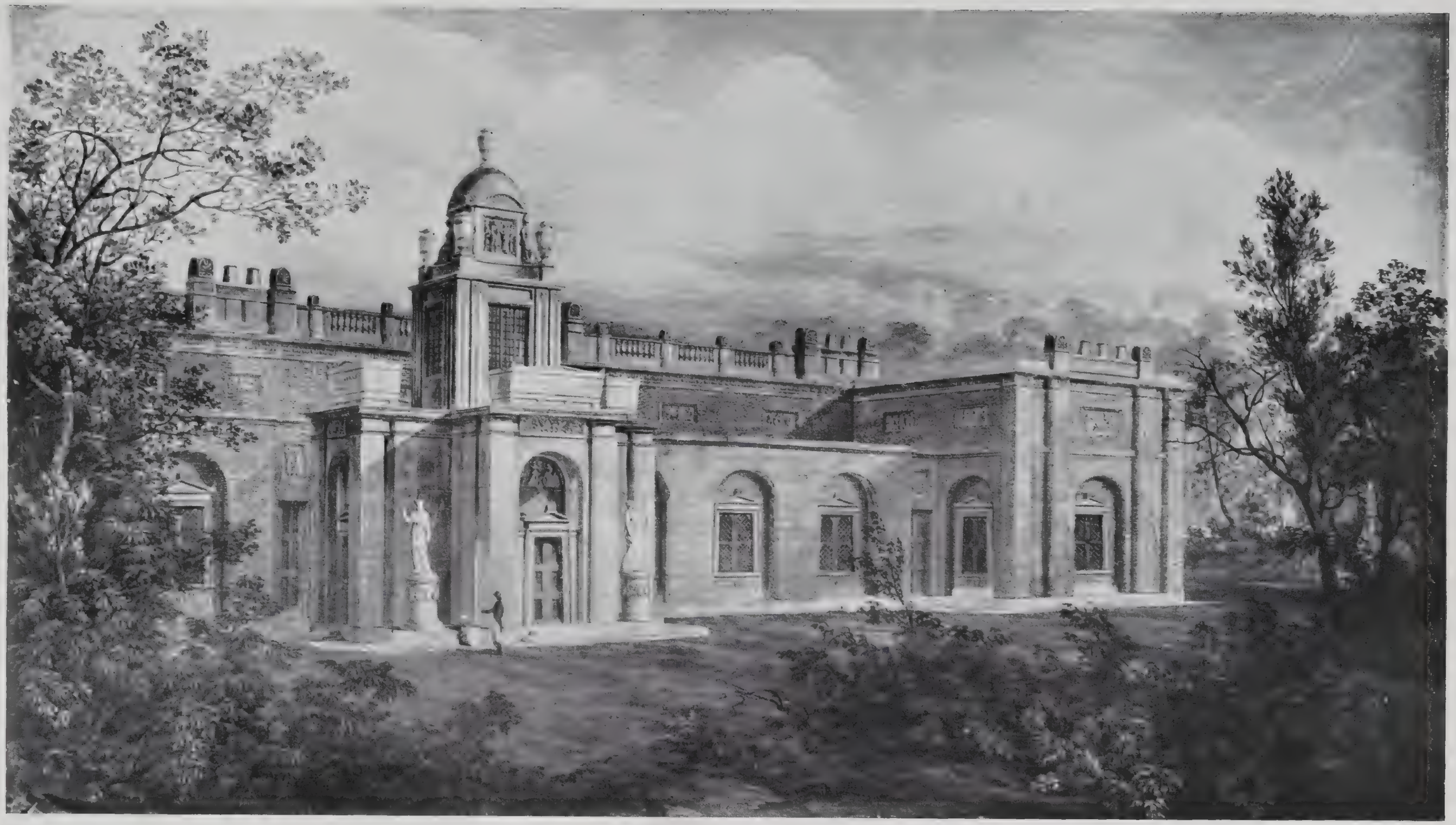

COMMUNION PLATE
FOR THE ALTAR OF A CHURCH IN THE GRECIAN STYLE
IHS
IHS

COTTINGHAM'S DESIGNS FOR IRONWORK. X.—COMMUNION PLATE.



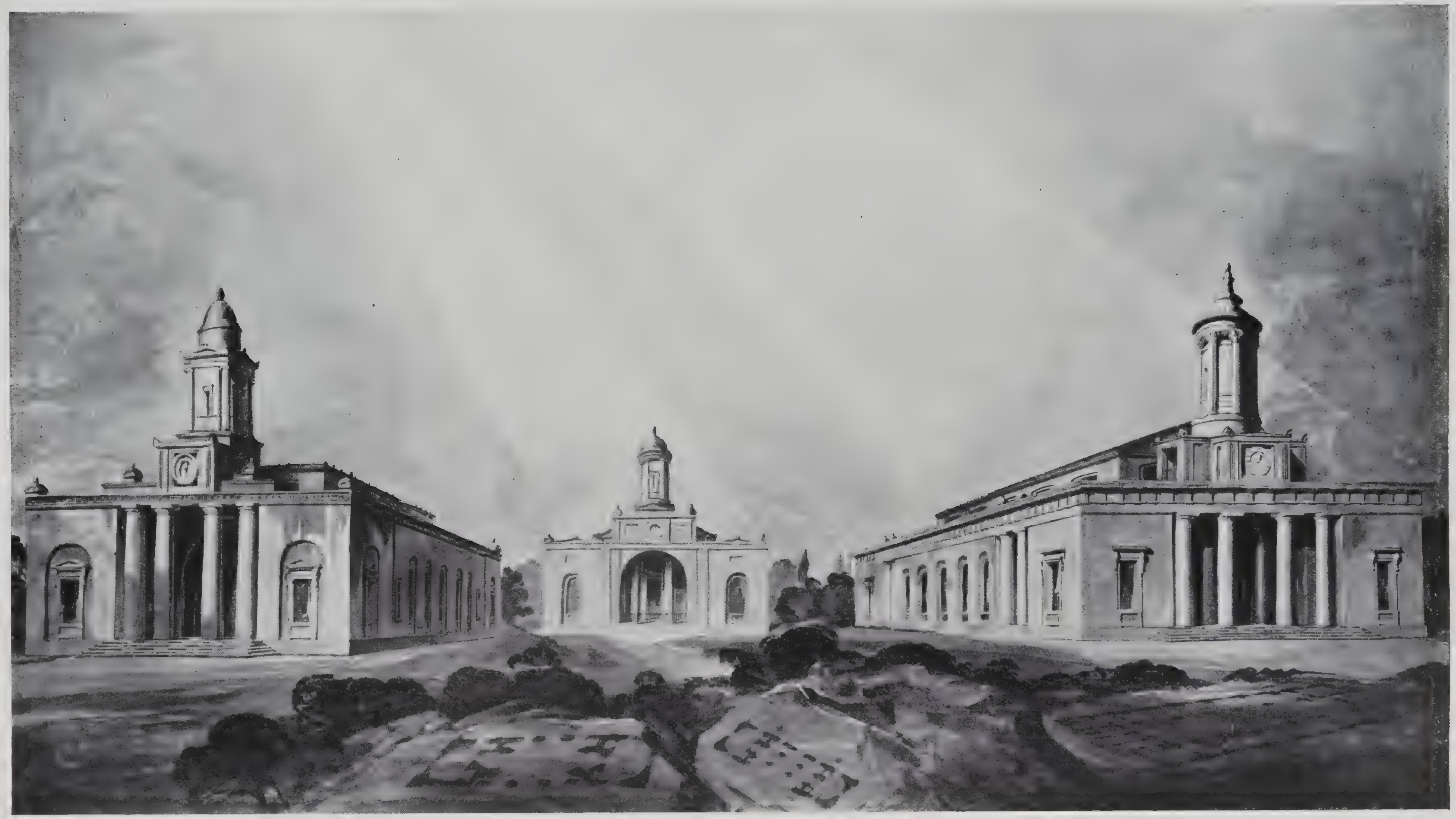
STUDENTS' DRAWINGS. XV.—DESIGN FOR A BUILDING COMMEMORATING THE UNIVERSAL ADOPTION OF THE GREENWICH MERIDIAN.

BY E. R. F. COLE.



MONUMENTAL ARCHITECTURE. XVI.—DULWICH PICTURE GALLERY.

SIR JOHN SOANE, ARCHITECT.



MONUMENTAL ARCHITECTURE. XVII.—DESIGNS FOR TRINITY CHURCH, MARYLEBONE ROAD, LONDON.

SIR JOHN SOANE, ARCHITECT.

PRACTICAL CHART OF TOWN PLANNING PROCEDURE.

FOR LOCAL AUTHORITIES' SCHEMES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON, M.SC., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art = The Articles of the Town Planning Procedure Regulations (Preparation of Schemes by L.A.s), 1914. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = A Local Authority's Scheme under the Act of 1909. Owner = Owner within the Meaning of the Lands Clauses Acts. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets.

No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 1. Consideration of proposal of L.A. to apply to L.G.B. for authority to prepare a scheme.	Resolution of L.A. deciding to consider a proposal to apply for authority to prepare a scheme, and authorising Town Planning Committee to commence proceedings set out in Articles i., ii., and iii. This is the Resolution from which the seven days referred to in Article i. (see Stage i., Col 3 (*a*)) commences to run. [Art. 1]	N.B.—For Mode of Service of Notices see Art. xxii. (*a*) Within SEVEN DAYS of Resolution (see Stage 1, Col. 2), serve notice of Intention upon any any Council interested in the land, included in the scheme. [Art. i.] (*b*) Serve notice of Intention upon Owners and any Council interested. Also upon C.C. if any main road affected. [Arts. ii. (*a*) and xxvii.] (*c*) Send similar notice of Intention where necessary to (1) Board of Agriculture and Fisheries; (2) Commissioners of Works; (3) Board of Trade; (4) Light Railway Commissioners. [Arts ii. (*a*) and xxvii.] (*d*) Advertise Intention in Local Paper. [Art. ii. (*a*)] (*e*) Furnish certified six-inch Map showing Land included in Scheme to any Council, any part of whose area is proposed to be included in the Scheme. [Art. ii. (*d*)], and if required by such Council, a certified copy of so much of Map No. 1, as extends to such area. [Art. ii. (*d*)]	(*a*) Conferences with Owners, Persons and Councils interested to consider objections and secure co-operation. [Art. iii. (*a*)] (*b*) Meeting of Owners, Persons and Councils interested. [Art. iii. (*b*) (1)] or serve notice stating conferences will be arranged on request. [Art. iii. (*b*) (2)] N.B.—The above notices may be incorporated in those sent out in Stage 1. Col. 3. (b), (c). [Art. ii. (c)]	(*a*) As required by Officers concerned of L.A. [Art. iii. (*a*)] (*b*) By notice served at least SEVEN DAYS before meeting. [Art. iii. (*b*) (1)] Send notice where necessary to (1) Board of Agriculture and Fisheries, (2) Commissioners of Works. [Art. xxvii.]	(*a*) Not later than first notice served under Article ii. (*a*) deposit Map No. 1 for free inspection and explanation at convenient place and keep deposited for THREE WEEKS from last notice served under Art. ii. (*a*). [Art. ii. (*b*)] N.B.—For Contents of Notice refer to Art. ii. (*c*).		(*a*) Immediately after Service of Notices under Article ii. (*a*) (see Stage 1, Col. 3 (*b*), (*c*), (*d*)), inform L.G.B. of such service. [Art. ii (*e*)]	

CHART OF TOWN PLANNING PROCEDURE FOR LOCAL AUTHORITIES' SCHEMES—STAGE I.

THE

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JOURNAL.

Wednesday, April 22, 1914. Volume XXXIX. No. 1007.

No. 81.

(*From Piranesi.*)

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THE ARCHITECTS' & BUILDERS' JOURNAL.

APRIL 22, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1007.

Authority and the Modern Spirit.

RECENTLY Professor Lethaby has told us that we have had "a great outburst of Authority." Recently, also, we have heard a good deal about the necessity for architects to put behind them the shibboleths and time-worn conventions of the past, and to seek to express the "Modern Spirit." In the interests, therefore, of clear thinking, it is worth while to try to discover what these two terms connote for architecture, what is their precise significance, and whether they are compatible or incompatible with each other. As regards Authority, there is not a great deal of difficulty. We have travelled past the stage when the term merely signified an institution, such as the Royal Institute or the Royal Academy, or some well-defined school or style in architectural practice. There are those, it is true, who still attempt to confine Authority within this narrowness of definition, and would have us acclaim this or that ancient monument as the embodiment of the one true gospel; but the majority, we are confident, think of it as something very much wider and grander—as an accumulation of ideas and principles gathered from many sources that have stood the test of ages. Authority in architectural practice is, in fact, an abstraction. For the purpose of promoting the professional welfare of a class we may invest it with a corporate body, but in itself it remains incapable of any such embodiment. At the same time this well-nigh unnameable group of ideas and principles clamours for a name of some sort, and we accordingly give it the name which, in the opinion of the vast majority of modern architects, comes nearest to expressing its content. We call it Classicism.

One arrives, then, at a moderately clear notion of what Authority means, as distinguished from the various "authorities" that are sometimes confused with it. But when one tries to define the Modern Spirit, and to offer advice or rules on the proper expression thereof, one at once encounters serious difficulties. What is the Modern Spirit? Is it love of change, restlessness? How is this to be expressed in terms of architecture? A merely restless building, a sort of up-to-date rococo, would not express the spirit of this age, but merely the fussy mentality of an individual architect. A street or a town of such buildings would inevitably result in a large increase of feeble-minded among the population condemned to live in them. It would be but the least part of such an evil that it would conflict with one of the first canons of Authority, that a building should have repose. But perhaps the Modern Spirit is something else. Is it class hatred, accompanied by class snobbishness, worship of wealth combined with a demand for its equalisation, free speech, free thought, free manners, or any other appurtenance of democracy? How are these things to be expressed in bricks and mortar? Can a façade—unless it happens to be that of a panel doctor's house—recall a mental vision of the glories of the Insurance Act, or a pediment express the aspirations of suffragists? Where is the central idea in the life and thought of this age which, if mirrored in architecture, would bind the parts into a unity? As a race, we are a disorganised, heterogeneous mass with strong convictions on
tively small matters and no convictions worth spea
of on relatively large ones. How should one set a
designing a building that purported to convince
our disproportionate convictions?

It is hardly necessary to point out that attemp
express the Modern Spirit on these, or, indeed, on
similar lines, would be hopelessly opposed to
canons of Authority—the perfect balance of parts
justness of proportions, the proper relationship of
ment to structure, the repose, the dignity, and so
We have been speaking strictly, of course, of
Modern Spirit in Life. The Modern Spirit in arch
ture is something entirely different; it is, in fact,
reversion to Authority of which Professor Let
spoke—it is exactly the opposite to the Modern
in Life, which is so strongly adverse to Authority.

That being the case, it is difficult to see any
bility of agreement between the two. Obviously
cannot be reconciled in the way suggested by
prophets of the new architecture, who would ha
create a native style out of nothing more substa
than a disregard of the rules and precedents tha
Authority's own framework. But we can acquit
March Phillipps, the doughty protagonist of the s
of thought that would vitalise architecture (by m
of a Tudor recipe) out of existence, of any real i
tion to subvert Authority; unless we are greatly
taken, it was not Authority against which he was d
ing his arrows, but Professionalism, and if the
turesque top-dressing were removed from his see
exaggerations, it might surprise many of us to find
many points there were on which we could agree
him. The chief trouble here is that his panacea
great deal worse than the disease he postu
However, if no perfect reconciliation between A
rity and the Modern Spirit can be hoped for at pre
we may at least hope for a *rapprochèment*—a
denoting a stage before reconciliation, in which
parties take a kindlier view of each other's diffic
without conceding their personal prepossess
Architects, for instance, imbued sincerely and
sionately, as we believe many of them are, wit
Classic tradition, might remember sometimes t
vital architecture, while it cannot spring from pa
ing to so-called popular tastes and demands, can
wholly be dissociated from them and remain vital

Architecture is no longer an aristocratic art.
prince patron has given place to the often far
princely committee. In practice, it is not possib
uphold the divorce between art and the con
people; and the architect of the future who doe
enter to some extent into the feelings, even the
judices, of his neighbours, who does not try to fa
the new civic sense in the citizen, which is a
thing than whole batches of town-planners, wil
himself in the wilderness. This is not to suggest
all architects should become professional sociolo
Sociology is investigation and deduction, and bet
the man who creates and the man who investigate
deduces there must always be a barrier. Again,
who are against Authority in architecture, who cla

:he expression of the Modern Spirit, should really ;e to consider the futility of previous revolts. With exception of the Gothic upheaval, the continuity of sic authority has remained unbroken through the ;. The Renaissance itself was, first and last, a rsion to Authority from mediæval chaos. Our bean and Georgian styles, were they not the :al development of that hankering after the sane, orderly, the authorititative that began to possess minds of architects before the Gothic medley of ntific engineering and monkish sentimentality had ts course?

ugin preached the Gothic Revival in this country return to the one true architectural style, the one ıority which no architect, calling himself Christian, l dare to subvert. But the almost laughable failure is apostles to maintain the style proved it to have ı not authority, but a mediæval deviation from it. are far from condemning Gothic root and branch. lded not a little to the constructional knowledge ted from Roman, Byzantine, and Romanesque ling. But it is not Authority; and the profession rchitecture has recognised this fact for some time Even if it were Authority, it would no more ess the Modern Spirit in Life than a catacomb l express the spirit of a garden suburb.

n some such lines as the above the artist's rever- for Authority and that intangible phantom, the ern Spirit, may accommodate each other. But will not coalesce so long as art and life remain, as must, distinct, if related, terms.

F. M.

The Institute and the Society of Architects.

HIS week we publish a further letter from Mr. McArthur Butler, in which the differences in regard to the policy of Registration between the ety of Architects and the Institute are set forth, the former's point of view, with a particularity not ılated to assuage the bitterness of this unhappy rel. The latter is the more deplorable in that the rity in both the Society and the Institute are, we reason to believe, and despite Mr. Blomfield's :, agreed upon the principle of ultimate Registra- by Bill, and differ only on the method of obtaining Probably the Society will gain a good deal of sym- y from the rank and file, who are apt to prefer a ng, if dangerous, policy to a tentative one; and a in aloofness in the Institute's attitude from the first rds the younger body will conceivably enhance ympathy. The relative professional status of the tute or the Society counts for very little in a case is kind, and for this reason we doubt whether Mr. field's invitation to the provincial societies to to heel, without explaining the grounds on which astic a step as active opposition to the Society's s to be undertaken, was wise or politic. The one ite result that is likely to ensue from this dispute revival of the doubts and fears of the anti-regis- nists. We shall certainly hear more of the folk expect it to be a mark of distinction for an archi- if Registration comes along, to be unregistered.

Reinforced Concrete and Art.

he last of his lectures at the Victoria and Albert Iuseum, Mr. Banister Fletcher asked, and eclined to answer, the question whether rein- l concrete had destroyed the art of architecture. ie implied that there was not much "art" about orced concrete work, when he remarked that we yet waiting for the genius who would breathe a nto armoured concrete construction. At present rue that the character of concrete is scientific and rian rather than artistic; mathematical calcula- as to the strength and durability of steel rein- ment take precedence of æsthetic soarings in the minds of those concerned with it. But this was for a long time the case with building with brick and stone; it is of the nature of things architectural that questions of practical utility should come before those of æsthetic development. Meanwhile the problem of extracting beauty from a concrete structure has for some time occupied the minds of architects, and there have been instances where it has been solved with sufficient success to justify our belief that this medium may yet be made the vehicle of a fine artistic expression.

The Regent's Park Estate.

TOWN planners should shortly find a new outlet for their energies if the idea of developing the Regent's Park Estate for residential and business purposes is carried out. It will be remembered that this estate, which formerly belonged to Lord Howard de Walden, was sold a few weeks ago to Mr. Derbyshire, of Nottingham, for £500,000. Its southern boundary is the Albert Road, running parallel with Regent's Canal, along the northern edge of the Park, and it is bounded on the east by Regent's Park and Primrose Hill. At present the houses of this district are for the most part undistinguished in character, though there are one or two exceptions to the rule. Many of them have been converted into maisonnettes for the remainder of their leases, which in several cases are falling in; others, again, have a long time to run. Development, therefore, must necessarily be a slow process. It need not, however, be uninteresting on this account. The neighbourhood, somewhat dilapidated as it may be, has acquired, like other suburbs of the inner ring, a distinct atmosphere that should act as a guide to more than one generation of sympathetic architects. Let us hope the property will not fall into the hands of unsympathetic ones.

St. Paul's Cathedral Preservation.

IT is disappointing to read that of the £70,000 required for ensuring the safety of St. Paul's Cathedral, only about £10,000 is at present within sight. Yet that the need for preservation work is urgent is shown conclusively in an intensely interesting article on the subject contributed to the April issue of the "Architectural Review" by Mr. Mervyn E. Macartney, Surveyor to the Fabric, who reminds us that during the two hundred years that have elapsed since St. Paul's was finished no great works of reparation have been undertaken, and that the general deterioration of the stone and leadwork, as well as the weakness of several of the piers, of the stonework of the lantern, and of the radiating buttresses of the great dome, render immediate operations imperative. (By the way, Mr. Macartney's article is illustrated by some extraordinarily interesting photographs, including two by Mr. F. J. Hall, one showing a view between the inner dome and the brick cone, and another a view between the brick cone and the outer dome: the latter photograph having been obtained as a result of four days' exposure of the plate!) One is rather at a loss to understand why the public are allowing the fund to languish. It may be that the alarmist reports as to the state of the Cathedral that have been industriously circulated for newspaper purposes have exhausted the public patience; or that the public have an impression that the Church and the City Corporation ought between them to be able to raise seventy thousand pounds without appealing to the general public. The Ecclesiastical Commissioners are giving £7,000, and the Clothworkers' Company have voted £1,000, the Mercers' £500, and the Vintners' £105. A correspondent of the "Guardian" suggests that it would be an object-lesson in unity if all the parish churches of England would, on Sunday, June 21st, the 239th anniversary of the stone-laying, raise an offertory for the fund.

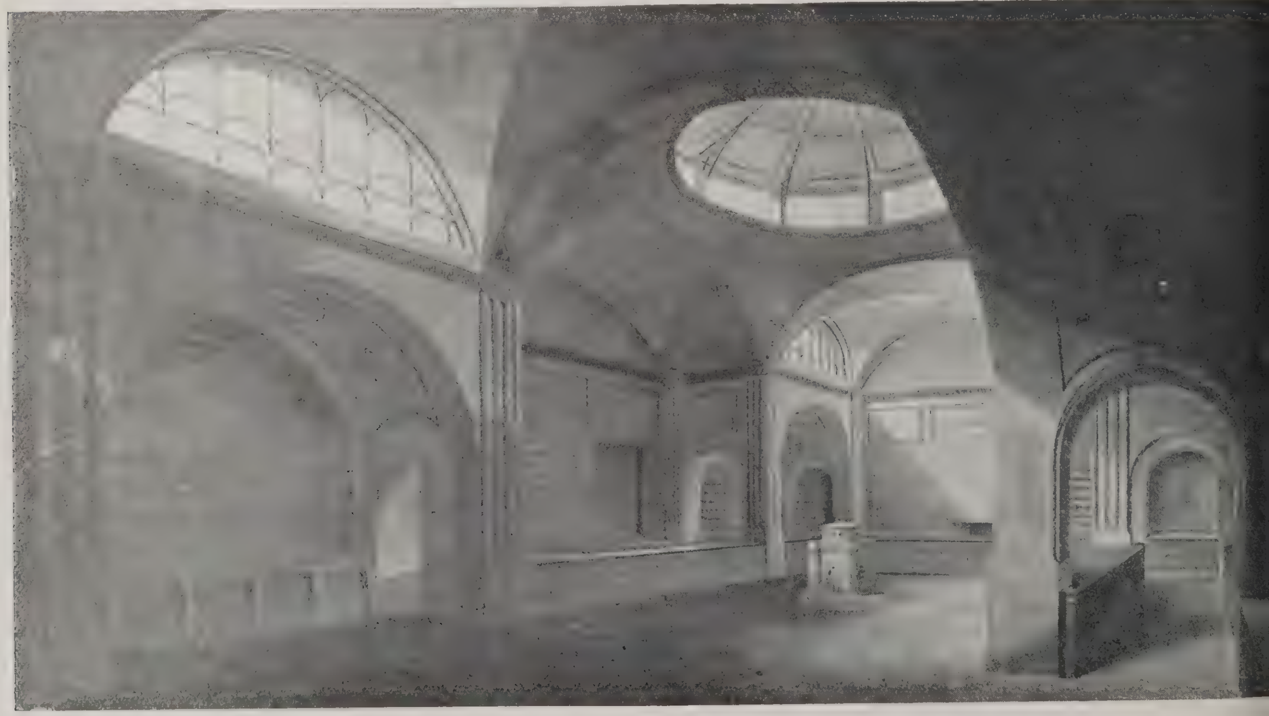
THE SOANE MUSEUM.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

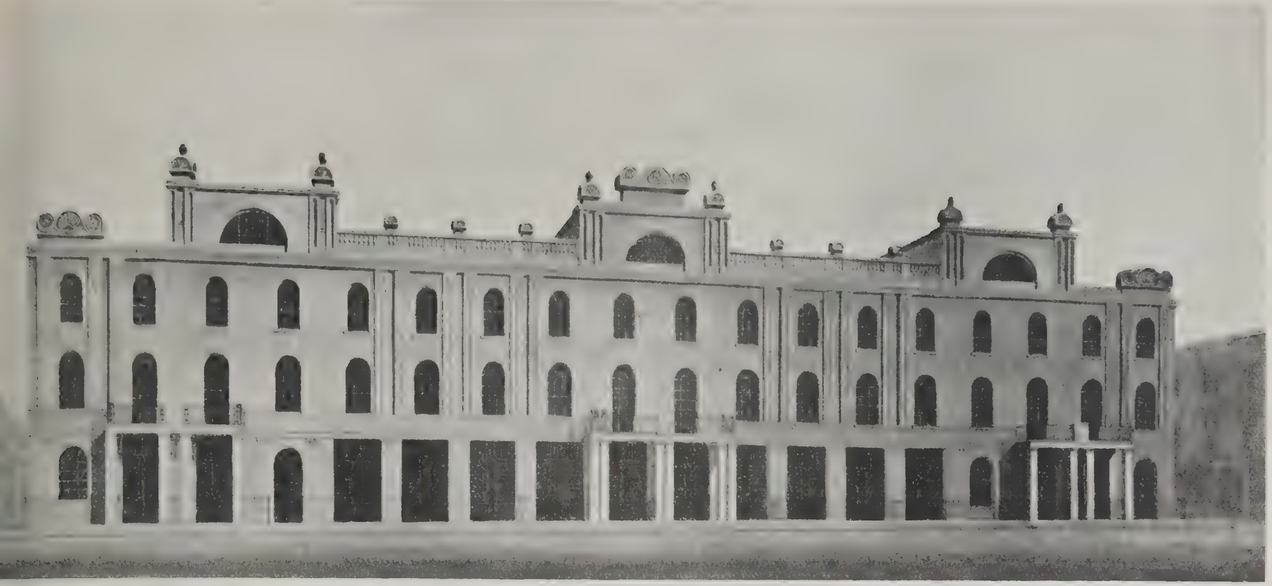
NO architect has ever left such a full account of his architectural self as has Sir John Soane. His little mansion in Lincoln's Inn Fields is a unique memorial. It is true that the houses of other notable men have been preserved almost exactly as they left them. There is Victor Hugo's house in Paris, and, more famous still, Goethe's house at Frankfort-on-the-Main. The latter are museums which contain interesting relics, furniture, pictures, and other personal belongings, but they tell us very little about the souls of these authors who can far better be studied in their written works. Soane, however, has succeeded in making his abode an almost complete impersonation of his character. There is not a mannerism, not a principle or dogma peculiar to Soane, that does not find expression in the museum in Lincoln's Inn Fields, and the collection of drawings and models affords us an opportunity of forming an accurate conception of the nature and extent of his architectural activities. There is evidence that Soane was never inclined to underrate the value of his own work, and he was determined that a complete record of it should be preserved for the benefit of posterity. It would almost appear as if, throughout his life, he had adopted as his motto the celebrated saying of Goethe that "Only fools are modest." Hence his student drawings are framed; hence he employed for his perspective sketches some of the best colourists of his day; hence his lectures were copied out in beautiful hand-written type and profusely illustrated with pictures which must have given his pupils at the Academy almost full occupation for many years. There are water-colour paintings showing in one imaginative composition all the executed works of Soane, there are busts of Soane at almost every turn, there are portraits of Soane galore—of Soane as a young man, of Soane as an old man, of Soane in the prime of life seated at breakfast in the bosom of his family with his two sons in attendance, looking subdued, as they well might. We can only conclude that his friends and relations who were privileged to share with him the comforts of his household must have sometimes felt a little tired of Sir
Soane. It is recorded that one of his sons left
and, revolting from the stern parental ways, to
devious courses from which he could not be dissu
even by enforced contemplation of Hogarth's te
series, the Rake's Progress, which was bought
hung upon the walls for his special benefit.
ne'er-do-well afterwards became editor of
"Quarterly Review" and took revenge by publi
an anonymous article in which he held up to ri
his father's work and opinions. He was disinhe
of course, but whether before or after this event
not known.

But even if the temperament of Sir John
appeared irksome to some of his intimate rela
lovers of architecture have reason to be grateful
very qualities which were the least likely to e
him to his contemporaries, for it was only by in
self-absorption that he was able to gather tog
for us such a splendid collection of relics. It
remarkable fact that in spite of his long and ar
practice he founded no school. Even Robert Sr
the most distinguished of his pupils, shows har
trace of his influence. His early successes an
social introductions that he received secured fo
the opportunity of getting an abundance of p
sional work. He was recognised in his own life
to be a man of genius, and yet for some strange r
he has suffered neglect. Perhaps his immediate
cessors felt little inclined to show deference to s
harsh and self-conscious personality as that
John Soane. But however that may be, the ho
Lincoln's Inn Fields is a precious national poss
and one which deserves to be more widely appre
than it is; the present writer is informed that
paratively few architectural students ever visit i
he hopes that these pages may in some slight me
draw attention to its beauty and interest.

The house presents a striking exterior. It mu
be considered by itself, however, for it is really
a part of a larger composition that includes the a



BANK STOCK OFFICE, BANK OF ENGLAND: VIEW LOOKING NORTH. SIR JOHN SOANE, ARCHITECT.



BUILDINGS IN REGENT STREET, LONDON. SIR JOHN SOANE, ARCHITECT.

iouses on either side, both of which were at one
ɔwned by Sir John Soane. The central projecting
has been somewhat marred, for it was found
ssary to close up the loggias on the first and
d floors and to incorporate them with the rooms
d. But the façade still possesses an individual
cter, and at a glance one can recognise this house
the work of Soane by the flat pilasters, the key-
rns and the anthemion ornament used in his
mary manner as crowning features of the roof.
decorated front would perhaps be described as a
fussy were it not for the fact that the eye obtains
diate relief by resting upon the comparatively
surfaces on either side. The pronounced accen-
on of the central part would be inexcusable if
part constituted an ordinary private house. The
e would be bereft of all repose and dignity if its
occupants displayed a like spirit of self-assertion.
his house must be regarded as a privileged one,
eing in reality a public institution, it is worthy of
chitectural emphasis it receives.

t us turn to the plan. Beyond the entrance lobby
oval staircase skilfully contrived to fit into the
ılar space bounded on one side by a party wall,
, following an ancient property boundary, makes
tuse angle with the frontage line. Soane seems
ve possessed the faculty (of which Wren, too,
an admirable display in his plans of City
hes) of being able to set the most perfect archi-
al shapes in the most irregular of sites. The
nt of symmetry which Soane succeeded in
ing here is quite amazing. We have vistas and
everywhere, and the important features of every
have a definite relation to each other. In his desire
rmality he overcame all obstacles. On the right-
side of the entrance lobby there is a door (neatly
ced by a cupboard exactly opposite to it) which
to the dining-room, a library forming one apart-
about forty feet long and twenty-two feet broad,
is only partially subdivided. The dining-room
es additional light from a small square internal
On either side of the window overlooking this
there are doors, of which one leads into the
fast room and the other into a corridor that com-
ates with the museum proper. This latter
ds over the space which was once the backyard
three houses, and it also covers the site of former
s. Hence the width of the front gives a quite
quate idea of the size of the museum, which
ts of about ten rooms on the ground floor and as
in the basement.

Before making any further remarks upon this complex little mansion, it may be well to consult the guide-book and description which Soane compiled himself for the benefit of students. As usual, he performed his task with the utmost thoroughness, and he produced a large volume complete in every particular and sumptuously illustrated. In his preface he says, " However carefully arranged as to general effect, or advantageously displayed as to light and shadow the works of art here described may be, it is obvious that in so extensive and various a collection some objects of great interest may require that the eye should be expressly directed to them," and he proceeds to whet our appetite for more information by adding that, "To render the following pages more pleasing and attractive to young minds, and to increase their love for the Fine Arts, pictorial and poetical, remarks on some of the most prominent features of the House and Museum, written by 'A Lady,' have been embodied with my own description." The capitals are Soane's, and they are obviously a tribute to the profound respect with which he regarded the critical capacity of this mysterious lady, whose name he has not seen fit to disclose to us. One cannot do better than quote some of her comments, especially such of them as relate to matters which are of architectural interest. Like every other visitor to the house at Lincoln's Inn Fields, she is an enthusiastic admirer of the wonderful effects of lighting which Soane obtains. She says, " The vista-like character of the entrance to what may be truly called a Temple of Art is extremely pleasing, whether seen as a whole illuminated by various coloured lights or examined in parts, each of which has the same advantage, since the light from the outer door of painted glass and those which descend from the staircase and also from the breakfast parlour, aided by reflections from mirrors judiciously interjected near the last-mentioned room as well as within it—all tend to produce those richly-tinted lights so highly admired in our finest cathedrals." It is clear that this lady had a trained faculty of perception. When she arrives at the museum itself she is again struck by the admirable quality of its illumination, and she writes, " The extent of the place before us, the multiplicity of the works of art by which we are in a manner enveloped, and the ingenuity elicited to create space and to obtain advantageous situations for those specimens most worthy of consideration, all press upon us the assurance that we have arrived at that 'promised land' to which from various parts we have been long looking. The first object that arrests attention must be the Apollo. The beauty of this fine statue, like every other object of interest around, is considerably enhanced by that exquisite distribution of light and colour which, often from undiscovered sources, sheds the most exquisite hues and produces the most magical effects throughout the museum, thereby communicating the only charm in which an assemblage of marbles must be deficient. The ornament which crowns the inside of the dome is a remarkable proof of this, light from below being so thrown upon it as to render it of a pearl-like hue and perfectly defined, where under common circumstances it would have been in darkness." Soane seems to have exercised the greatest ingenuity in making visible every corner and cranny of his museum. It is not until one descends to the basement that one realises the full extent of his powers. The internal court is so tiny that one would have thought it quite impossible to extract half enough light to show up the exhibits, but by means of mirrors cunningly placed and the narrow top-lights of semi-circular section, of which he was so fond, he distributed a beautiful glamour, a soft, even tone, which is peculiarly suitable for the display of sculpture. Soane was the first to introduce stained glass into ordinary private houses. Some people will think that a heavy responsibility rests upon him for establishing a precedent which has been too widely followed by tasteless amateurs, who have used stained glass with neither wisdom nor propriety. Soane held, however, that while coloured panes ought not to be used in living-rooms, from which one wishes to obtain a view of the surrounding scenery, they were yet eminently suitable for vestibules, corridors, and staircases. The present writer has seldom seen stained glass used with happier effect than in the main compartment of this museum. Standing in the basement in front of the sarcophagus one sees nothing but grey walls covered with grey marbles, and sculpture casts which, in spite of their individual interest, would provide a somewhat wearisome spectacle were it not for the rich stream of golden light that pours down behind the Apollo Belvedere. If all the light had been gold a sickly effect would have been obtained, as if one were looking out of yellow spectacles, but by allowing the ordinary sunlight to illumine nine-tenths of the room he obtains the requisite interest and contrast by introducing this narrow ray of colour which issues from a top window curved in such a shape that, instead of spreading the light, it concentrates it and casts it immediately downwards. Soane was aware of the dangers attaching to the indiscriminate use of stained glass, and it is notable that he had a marked preference for yellow panes, which produce the least theatrical effect. If the Apollo had been suffused with a green, purple, blue, or pink light the result would have been cheap and meretricious. But with a rich gold light the setting sun has made us familiar.

There is only space here to allude to the exhibits with the utmost brevity. We may particularly mention some exquisite Greek fragments in the "little study," which is part of the passage leading out of the dining-room. In the corridor opposite the Hogarth Room there are several Roman remains from the temple of Castor and Pollux. The Hogarth Room itself will perhaps be of greater interest to architects than any part of the museum, for here we can see a large number of Soane's own designs. The ceiling of this room is elaborately enriched with plaster ornaments in compartments forming arched canopies. On the north and west sides of the room are cabinets, and on the south are movable planes with sufficient space between for pictures. By this arrangement. we are told, "the small space of 13 ft. 8 in. in length, 12 ft. 4 in. in breadth, and 19 ft. 6 in. in height, which are the actual dimensions, is rendered capable of containing as many pictures as a gallery of the same height 20 ft. broad and 45 ft. long Another advantage of the arrangement is that the pictures can be seen at different angles vision." Some of the buildings illustrated here ha been referred to in two preceding articles, but design for a King's Palace on Constitution Hill not mentioned. It is somewhat remarkable that So never turned his attention to garden design and architectural lay-out of terraces and paths. He planted this monumental group of buildings in midst of a natural park without attempting to mak transition between the formal and informal. design for an entrance to Hyde Park is a lamenta failure, and it is fortunate that the work was execu by Decimus Burton instead. There are also s student designs described by Soane as "Visions in gay morning of youth." Of Hogarth's pictures much need be said. The mysterious lady tells us "They have a power of enchanting every fac within their awful sphere, and compelling us to gaze that which we fear to behold, and to think on that f which we desire to fly, and in many an after-h haunting the memory and awakening virtuous sor and holy resolution." Of the entrance to the mus from the corridor the same lady says, "The effec Grecian columns symmetrically placed is always gr and beautiful. These of Corinthian architecture (elegant order which owes its origin to the purest a tions of the heart) here disposed in transverse lines strictly suitable to the place they occupy and to t striking objects whither they conduct us." And a l later she remarks for our edification that "not ancient moulding—not one architrave, column broken cornice is before us that is not calculate excite wonder by its own inherent merits, to cal recollections of importance from knowledge memory, and inspire the cultivated mind with u projects and elegant designs." Unfortunately m of the casts are of unknown origin, and this some detracts from their value, but a great deal of inte ing detail can be found among them. In the a chamber to the breakfast-room there is a small va a column exquisitely decorated. There is also a l collection of Roman cinerary urns. Soane showe admiration of Flaxman by collecting some of his s tured works. In the basement there are mode several of his buildings. We have a design fo Church of Holy Trinity, Marylebone, the north of the Law Courts at Westminster, and the Boa Trade and Privy Council Offices, Whitehall. these designs show his hatred of projections, eve occasions when a slight projection is necessar accentuate an important part of a façade. A di of fussiness can be carried too far, and may lead flatness that deprives a building of its legiti expression. It is noticeable that his theory regard to balustrades is here carried out in pra In the building, which has a steep roof, there i balustrade, but only a pierced parapet, which w afford no protection to anyone who chose to walk a the gutter. As this roof is not a promenade, it appe to Soane that it ought not to be provided wi balustrade, which he regarded as nothing but a s hand-rail. Wren seems to have held a similar op and was extremely angry when at the King's wis was obliged to place a balustrade around the roof Paul's Cathedral instead of the plain blocking-c he originally designed. To students of archite Soane's library is of great value. and the fifty- folios of the work of Robert Adam are in thems worth a visit of inspection.

The house itself, however, may be counted a most important part of the "exhibition." Afte manner of those wonderful Japanese landscape deners, Soane attempted to produce a miniature dise and to create a sense of space where there space. Soane's interiors are unique. No other a tect has ever designed such a variety of bea vaults and ceilings. Yet, in spite of the exuberan fancy he was capable of the utmost restraint when e he had defined what he considered to be a princi- of design. For instance, there is not a single cor- : in this house, for he considered such a feature to ong exclusively to the exterior of a building. His ns are so contrived, however, that one does not n to miss the cornices. There is no sense of bald- s. On the contrary, he obtains effects that have a er character than any cornice could possess, but it t be remarked that they must have been exceed- y costly. His elaborate bookcase, incorporated the wall surface, and his arched canopies, are gs which could only be indulged in by men of le means.

he house and museum of Sir John Soane are open Tuesdays, Wednesdays, Thursdays, and Fridays.

KING'S CROSS COMPETITION.

HE awards in this competition, the terms and conditions of which were announced in our issue of . March 11 last, have been made as follows:—

irst Prize (£5)—Mr. Bingham Carre, 22, Bucking- Street, Adelphi, London, W.C.

cond Prize (£3)—Mr. C. Harrold Norton, 14, ford Row, London, W.C.

hird Prize (£2)—Mr. Thomas Braddock, 176, gston Road, Merton Park, S.W.

heques for the amounts will accordingly be for- ded to the successful competitors.

large number of entries were received. Next k we shall publish our Assessor's (Mr. A. E. ardson) Report on the whole competition, with ial reference to the work of the successful com- ors and of others whose designs are worthy of tion, together with illustrations.

THE PLATES.

HE Plates in this week's issue are restricted to British work, but they afford nevertheless a considerable variety of subjects in past and present itecture. Recently we published two interior s of Mr. Burnet's work on the British Museum nsion, and we now give a *View in First Floor lery* (*Current Architecture, LVI.*), which renders xcellent idea both of the architecture and of the osition of the exhibition cases. Sir John Soane's *gn for a Tomb* (*Monumental Architecture, II.*) comes next. The Tomb was intended for Sir and his wife. It is not the best expression of his tic genius, the design being a trifle ponderous and rnament more than a trifle heavy-footed; but the eption is individual, and the Tomb is far from pressive.

e continue our new series of Georgian houses with nt elevation of *Durlstone Manor, Champion Hill, lon, S.E.* (*Small Houses of the Late Georgian od, V.*). The composition of this is interesting, he detail is a little coarse, and there is a lack of connection between the side and central masses. wooden sashes to the semi-circular leaded win- are modern. In spite of its defects, the house good deal of character, and the projecting portico ne central bay strikes an original note. The rials are stock brick and plaster.

r fourth Plate shows a collection of Cottingham's *tes and Wreaths* (*Cottingham's Designs for work, XI.*), and our fifth an interior of *Bucking- Palace: The Marble Hall* (*Palace Interiors,*), which concludes a series of views of Bucking- Palace previously published in the Journal; the d stage of our *Practical Chart of Town Planning Procedure* (*for Local Authorities' Schemes*) constitutes our sixth Plate. For the explanatory article to this chart, readers should refer to our last issue. A Working Drawing by Messrs. Ivor Jones and Percy Thomas, *Cardiff Technical Institute: Detail of Main Staircase* (*Working Drawings by Well-known Architects* (*New Series*), *XXII.*), is reproduced as a double Plate.

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or opinions expressed by correspondents, who are asked to be brief, and to write on one side only of the paper.

Registration: "Act" or "Charter."

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—When the Institute was proposing to promote Registration by statute it was stated that one insuperable obstacle to their doing so was an alleged disability due to the fact that Licentiates could not vote on the matter, and that before the Institute could proceed further with Registration, that disability must be removed.

If the Institute cannot legally promote statutory Registration because of this alleged disability, how can they properly proceed with any other form of Registration under the same circumstances? Are they sure that they are not acting "ultra vires." as they have been on the point of doing in other matters on two other occasions?

Personally, I am more convinced than ever that the position of the Licentiates does not constitute a disability, and that there is nothing to prevent the Institute from promoting statutory Registration if they choose to do so.

However that may be, I think that the following comparative statement of the effect of the respective proposals for Registration by "Statute" or by "Charter," may be of particular general interest and value at this juncture:

The Society is promoting a Bill in Parliament for the statutory registration of architects, covering the whole profession, irrespective of membership in any architectural bodies, in the interests of the community.	The Institute is promoting proposals for a new charter, to enable it to establish a voluntary register of "qualified" architects, in the interests of the Institute.
Registration by statute, as proposed by the Society	Registration by charter, as proposed by the Institute
(a) Would establish a register of persons recognised by law as qualified architects.	(a) Would establish a register of persons recognised by the Institute as qualified architects.
(b) Would establish a governing body representative of the whole profession, with administrative and disciplinary powers, enabling them (inter alia) to strike architects off the roll for professional misconduct, and so prevent them from continuing to practise as architects.	(b) Would establish a Standing Committee with powers restricted to reporting to the Council of the Institute, whose utmost disciplinary action would be limited to removing members from the register for professional misconduct, a proceeding which would not prevent them from continuing to practise as Architects.
(c) Would protect all vested interests.	(c) Would protect certain vested interests only.
(d) Would give all qualified persons the right to register.	(d) Would reserve to the R.I.B.A. Council the right to veto qualified applicants for registration.
(e) Would prevent unqualified persons from practising as architects and from recovering fees.	(e) Would not prevent any persons, qualified or otherwise, from practising as architects, or from describing themselves as architects. Thus, an abuse which it is one of the aims of Statutory Registration to stop would be perpetuated under such a voluntary system of registration.

C. McARTHUR BUTLER,

Secretary of the Society of Architects.

TESTIMONIES OF STUDY AT THE R.I.B.A.

BY A. E. RICHARDSON, F.R.I.B.A.

A careful inspection of the exhibited works revealed the fact that scholarship now takes the place of ill-considered flights of originality, that the whole musical scale of Classic architecture is sounded for type and character, and that honest attempts are being made to assimilate tried models as well as to enhance traditional interest.

While acknowledging the improvement in the work of students generally, it is of paramount importance to congratulate those gentlemen who organise such academic studies and exercise their influence in the production of designs from the initial stage to that of the finished subject. All the masters of the various architectural schools now combine in a common policy to further the Classic spirit. It is no longer necessary to single out any particular school as being pre-eminent; there is a unanimity of purpose which makes for the betterment of English art. .

In London, Mr. Robert Atkinson at the Architectural Association, Mr. Davis at the Atelier, Mr. Leslie Wilkinson at University College, and Mr. Ramsey at Regent Street Polytechnic are powerful factors. Professor C. H. Reilly, Professor Adshead, and Messrs. Lionel Budden and Patrick Abercrombie are well known as the far-seeing leaders who fought against obsolete methods. Professor Gourlay, of Glasgow, and Professor Dickie, of Manchester, are responsible for the reformation of the old system of architectural education which formerly obtained in their respective centres.

Monumental Fireplaces.

In criticising the works, which were roughly arranged into groups of schools, I felt it expedient to give no undue precedence to any particular design, but to approach them much in the attitude of an ordinary spectator.

The first to command attention was No. 92, by H. Norris Jepson, of University College, London. This design was quietly consistent in arrangement and very workmanlike in the detail.

No. 89, A. G. Johnson (Architectural Association) had a fine sense for quiet colouring, but his predilection for heavy French detail should not be encouraged.

No. 88 (Liverpool School of Architecture) is appropriate and consistent, after the manner of Percier et Fontaine, but the undue application of minute ornament leaves much to be desired.

No. 87, G. Davidson (Liverpool School of Architecture) is a bold Neo-Grec design. The subject has been designed to form part of the decorative scheme of a hall, but the fireplace is at variance with the wall treatment.

No. 72, Thomas Sanders (Liverpool School of Architecture). This scheme is admirably considered in its relation to the hall.

No. 73, A. L. Dotto (Liverpool School of Architecture), submitted a design which would look very well in execution; the businesslike arrangement of the drawings and details cannot be too highly commended.

No. 74, W. F. Pennington, follows the Empire tradition of Percier et Fontaine.

No. 70, S. B. Howard (Liverpool School of Architecture) presented a reception-room of charming character, with the fireplace rightly treated as an incident in the scale of the room.

No. 83, Sydney Henshall (Liverpool School of Architecture). This fine study showed the author's grounding in French models. The fireplace was perfect in itself, but the overmantel needed a simpler adjustment to the architecture below.

No. 82, O. J. Tebbutt (Ealing). This design, evidently suggested by the work of Alfred Stevens, spoke well of the author's humility.

No. 77, H. Newbold (Liverpool School of Architecture). This student's conception was marred by the heavy character of the detail.

No. 64, Orlando Jones (Manchester School of Architecture). A fireplace treatment based on the pure and scholarly Italian work reminiscent of the School of Peruzzi. One would like to see more students follow this master.

No. 56, Grahame Leadon. This quiet and tasteful design followed an English Renaissance model with exactitude.

No. 44 (Liverpool School of Architecture). A fine design in itself for a fireplace, but the treatment of the surroundings left much to be desired.

No. 30, J. Macgregor (Golder's Green). A beautifully presented Italian design.

No. 23 (University College). This design had exceptional merit, a fine scale being maintained in every part.

No. 35, A. E. Stott (Liverpool School of Architecture) submitted a scholarly design following an Empire model.

No. 33, J. B. Walsh (Architectural Association). This design, well schemed and presented, followed a French motif.

No. 28, A. L. Macmillian (Southport). This student's conception of a recess, containing a fireplace, such as would be suitable for an hotel, was good, but the beam spanning the columns was far too lengthy.

No. 21, R. A. Duncan (Architectural Association). This design, as a conception, was the finest in the room. The author should study the figure a little more closely and should beware of a too sinuous line in figure composition.

No. 18 (Architectural Association). A finely conceived Renaissance design.

No. 16, James Burford (Architectural Association). A well-handled composition beautifully presented.

No. 14, Alex Fowler (Architectural Association). This design was conceived as the focal point in a semi-circular-ended room. The author's acquaintance with the detail of the Palais de Justice, Brussels, has stood him in good stead.

No. 10, J. H. Jacob (Architectural Association) submitted a finely-balanced scheme.

No. 7, Wilmot Ching. This design, a rich version of Italian Renaissance, was very attractive.

No. 5, George Tebbs (Architectural Association) sent a well-composed design, the character being exceptionally good.

No. 97, W. B. Binnie. This design showed a powerful composition; the type of detail followed a Neo-Grec model.

In the foregoing groups the work of the Architectural Association was exceptionally good. The system of designing in parallel perspective cannot be too highly praised.

CONSTRUCTIONAL SUBJECT.

Bridge Design.

In contrast to the previous subject, the constructional subject called for a deeper knowledge of practical matters. In the majority of cases the students combined the qualities of good design and sound construction in the right way.

No. 43, F. H. Broadhead, showe design for an arcade over a great arc treatment sanctioned by precedent.

No. 39, W. E. Foale. This design lowed the eighteenth century English dition with a suspicion of Chinoiseri the treatment of the balustrading. construction was exceptionally good. would be a pleasure to encounter su design in being.

No. 33, F. E. Gooder. A bridge de following an Italian motif, well consid but needing a slight adjustment to th tablature over the containing pilaster

No. 30, Lewis Jones (Atelier). Thi sign adheres to the monumental note.

No. 26, W. E. Terrill submitted a b of good masonry design.

No. 21, Archibald Macpherson (E burgh) sent a design of provi character, Heriot's Hospital Classic, finely worked out in detail.

No. 14, E. L. Carreras (Atelier). design for a stone bridge of single was by far the best of its class in the bition. The author shows great pr for the handling of monumental sub His design is strong, appropriate, tasteful.

Miscellaneous Designs.

A. W. Rowlandson exhibits a gran design for a guildhall which on an shows faults in the planning.

G. H. Dicksee (Architectural As tion) submits a well-proportioned sc for a railway station of minor importa

The advance over the designs subn so recently as the last competiti clearly apparent, and the standard a at is a very high one. If the move towards good taste is persisted in wit same energy the old taunt against E architecture will soon lose its sting.

THE APPROVED DESIGNS.

The Board of Architectural Edu of the Royal Institute of British Arch announce that the designs submitted following students (who are qualifyi the Final Examination) have approved:

SUBJECT XII. (*a*).

Design for a Lighthouse.

Mr. I. Omar (Egypt).

SUBJECT XIII. (*a*).

Design for a Fireplace.

Allcorn, W. J.
Allen, G. (U.).
Alison, W.
Bennett, G.
Binnie, W. B.
Bowes, R.
Brooks, C. J.
Burford, J. (L.).
Butt, P. (A.A.).
Callendar, G. W. (A.A.).
Charlewood, G. E.
Cheek, C. C.
Ching, W. T. (A.A.).
Clark, C. J.
Cosser, G. A. (U.).
Davidson, G. (L.).
Derry, D. C. (A.A.).
Duncan, R. A. (A.A.).
Eaton, G. M.
Evans, T. C. (A.A.).
Fincham, E.
Forbes, A. (A.A.).
Frater, R.
Fyfe, J. S.
George, B. (A.A.).
Goodwin, H. T.
Gossling, H. F. (A.A.)
Graham, R. G.
Grant, J. D.
Hall, R. B.
Hague, H. V.
Hamilton, A. B. (A.A.).
Head, G. L.
Hendry, M.
Henshall, L. E. (L.).
Herford, T. W.
Hossack, J. D.
Howard, S. B. (L.).
Jacob, J. H. (A.A.).
Jepson, H. N. (U.).
Johnson, A. G. (L.).
Jones, W. O.
Kassem, H. Z.
Kellock, A. D.
Koch, M. D. (A
Langdell, G. A.
Lavender, E. C.
Leadon, G. S. (
Love, R. M.
Loweth, S. H.
Luyken, H. M.
Macgregor, J. (
Macmillan, A. I
Maxwell, A. E.
McKay, J. R.
Maddock, R. H.
Medd, H. A. N.
Mortimer, A. L.
Moore, R. S.
Mowat, D. G. (
Musmann, E. B.
Newbold, O. (L.
Owen, A. H.
Pace, C. L.
Pennington W.
Robertson, A. W.
Robinson, N. S.
Rose, G. A.
Rowntree, C.
Ryan, H. A. (A
Sanders, T. A. (
Shattock, L. H.
Shenstone, G. (
Silcock, A. (A.A
Spence, A. T.
Stainsby, G. P.
Stott, A. E. (L.)
Taylor, J. A. C.
Tebbutt, H. J.
Thorpe, A.
Threadgold, R.
Triscott, H. S.
Walch, J. B. M.
Walker, H. F.
Walker, D. W.
Whitehead, H. M
Williamson, F.
Wilson, J. F.

SUBJECT XIII. (*b*).

Design for a Foot-bridge.

ms, W. A. C. (L.).
on, W.
rew, H.
iruffydd, C. O.
strong, J. R.
, C. H.
enal, H. (A.A.).
ey, F. A.
y, J.
eras, E. L.
kwell, R.
les, H. L.
sland, H. E.
inson, J.
sett, T. W. (A.A.).
er, J. C.
e, W. E.
, L. S.
ler, F. E. (L.).

Goodwin, H. T.
Grellier, C. (A.A.).
Head, G. L.
Lavender, E. C.
Macpherson, A. A.
Matthews, J. B
Moore, J.
Moscrop, W. N. I.
Palmer, J.
Robertson, M.
Rose, G. A.
Stainsby, G. P.
Swallow, J. C.
Terrill, W. E. W.
Toothill, I. C. P.
White, P. G. (A.A.).
Woodhouse, C. H.
Wyatt, H. (A.A.).

A. = Architectural Association School.
= Liverpool University School of Archi-
ire.
= University College, London.

WN-PLANNING COMPETITION, DUBLIN.

competition for the improvement and nsion of Dublin is being promoted by Executive Committee of the Civic Extion, Ireland, 1914. His Excellency Earl of Aberdeen, Lord-Lieutenant of and, has offered a premium of £500 to warded to the author or authors of the gn placed first.

eometrical plans and sections are to be pared to scales based on British stanls of measurement, and the general design may be drawn on the scale of n. to the mile or 6 in. to the mile.

utline plans of particular portions of town plan, treated in fuller detail, are e as far as possible upon the scale of n. to the mile, and street sections upon scale of 1 in. to 20 ft.

ousing plans, showing treatment suged for existing tenements and types of posed new cottages, to be upon the e of 1⁄8 in. to 1 ft. Perspectives are not red.

rawings are to be mounted on linen on stretchers, and these should not exl the dimensions for the general city gn.

descriptive report, typewritten or ted, must accompany designs, and t be provided with a summary of its n conclusions, recommendations, and nates.

esigns and report must be submitted out any distinguishing name, mark, otto; but a sealed envelope containing name and address of its author must be rely attached to the general city gn. Designs must be delivered, care paid, on or before September 1, , addressed to the Town-Planning petition, the Civic Exhibition, Linen-Buildings, Dublin, Ireland.

fter adjudication the designs and res may be exhibited in the Civic Exhin, or elsewhere, under the auspices of ommittee.

he premiated design and report shall me the property of the Housing and n-Planning Association of Ireland out further payment, and shall be deted in its collections for reference, and aps for further exhibition.

ther designs will be returned to comors, but the Association is also willing reserve for reference or exhibition the inals (or copies) of designs awarded ourable mention, and will lay them, g with the premiated designs, before City Corporation and the Government, the recommendation that in the event ny plan or suggestion being selected execution this should be arranged for the designer.

The adjudicators are: Professor Patrick Geddes, Edinburgh; John Nolen, M.A., Sc.D.F.A.S.L.A., Cambridge, Mass., U.S.A.; Charles J. MacCarthy, F.R.I.A.I., City Architect, Dublin.

The committee are not yet in a position to foresee the requirements and future development of Dublin with sufficient definiteness to justify them in promising to recommend for execution any of the town plans which may be submitted in this competition. The object is rather to elicit plans and reports of a preliminary and suggestive character, and thus to obtain contributions and alternatives which may be of value towards the guidance of the future development of the city in its various directions.

AREA TO BE CONSIDERED.

For the purpose of the present competition, the area may be described as "Greater Dublin," and considered as not only including the adjacent townships of Pembroke and Rathmines, but as ranging from Howth to Kingstown and Dalkey inclusive, and from Glasnevin and Ashtown to Dundrum.

Schemes shall be treated as far as possible under the following main headings:

(*a*) Communications.
(*b*) Housing, Central and Suburban.
(*c*) Metropolitan Improvements.

A.—1. *Road, Railway, and Canal Systems* should be considered in relation to the economical working and possible developments of (*a*) general, Irish, and oversea traffic, (*b*) of the industrial and other requirements of the city and its immediately surrounding region.

2. *The Location of Existing Industries* should be discussed, with suggested provision for future developments, and better localisation, if possible. The grouping of small workshops, the supply of garage accommodation, etc., for various quarters, should be considered.

3. *Main Thoroughfares and Streets, Existing or Proposed.*—Discussion of traffic: Motor, cartage, tramways, etc., with modifications and extensions desirable both as regards Greater Dublin and its central area, provision for the growth and extension of industrial, shopping, residential, and other areas.

B.—1. *Existing Tenements.*—These are described in the report of the recent L.G.B. Enquiry under three headings, A, B, C. Suggestions are desired for their respective treatment, with sketch plans and estimates.

2. *Dwellings Required.*—These are estimated in the above-mentioned report at 14,000. Housing to this extent (including possible utilisation of existing tenements) should therefore be comprehensively dealt with. Sketch plans and estimates should be furnished for the various types of dwellings recommended, with block plans suitable to given aspects, and showing proposed distribution of them in town quarters and in suburbs.

3. *Density of Housing.*—In the rebuilt town quarters this should not exceed 100 persons per acre, and in the suburbs sixty persons per acre.

4. *Period of Execution.*—A scheme should be outlined for gradual execution of the housing scheme within a period of, say, ten years, and with approximate estimates of expenditure for each stage.

Attention should be given towards minimising inconvenience to the population concerned, and in particular towards the risks of local increase of congestion and rise of rentals, which might be caused by demolition outrunning construction in any district.

Possible Sites.—These will be broadly indicated, for city areas and for suburbs, in the map accompanying evidence of L.G.B. Inquiry.

Open Spaces, Playgrounds, Gardens, etc.—Attention should be paid to the provision of these in every quarter treated, and upon as full a scale as may be compatible with local circumstances. It may be mentioned that the standards now being taken as normal by American cities are that of reserving one acre for every ten of the total city area, or of allowing one acre of recreative space per 200 of population. These standards are also being adopted in town-planning schemes in England.

Consideration may be given to the possible removal, in future years, to the suburbs or the country, of institutions of various kinds, whose buildings and grounds, originally suburban, are now less favourably situated for their purposes, and at present occupy a large aggregate acreage within the city. Suggestions towards facilitating the return of such institutions to suburban or rural conditions by the remunerative re-planning of their present sites, for housing and other purposes, may therefore be submitted.

C.—1. *Controlling General Features.*—Attention should be paid to the main existing features of the city, and to the possible fuller utilisation of the advantages of its situation. Primarily the Liffey, with its quays, bridges, and approaches, gives opportunities for improvement; as also do the courses of the minor rivers and of the canals. The sea front should be considered and the views and accesses towards hills and mountains kept in mind.

2. *Public Buildings and Associated Planning.*—Suggestions may be made towards the provision of space for extensions when required, of existing public buildings and institutions, national, municipal, educational, etc., particularly where improvement of the existing planning is suggested.

Sites may also be indicated, with appropriate planning for the surroundings, for any or all of the following:

Additional Government and administrative buildings as required, Catholic cathedral, modern art gallery, opera house, or national theatre, music auditorium, etc.

Antiquities must be preserved and characteristic buildings of different periods should be retained as far as possible.

3. *Parks and Gardens, Parkways, Boulevards, etc.*—Suggestions are desired towards the improvement and better access and utilisation of the existing parks and gardens, and towards future extensions and connections as a park system with parkways and boulevards.

The committee hope to be able to forward to candidates as speedily as possible the following books, maps, and plans:

A.—GENERAL REFERENCE.

1. Ordnance Survey map of Dublin and district, 1 in. to 1 mile.

2. Ordnance Survey maps of Dublin, 6 in. to 1 mile.

3. Ordnance Survey map of Dublin (with contour lines at 5 ft. intervals). 12 in. to 1 mile.

4. Map of Dublin, with geological features.

5. Guide to Dublin and dictionary of Dublin will be supplied, if desired.

The Ordnance Survey maps of Dublin, 25 in. to 1 mile, and other maps may be purchased by candidates from Hodges, Figgis, and Co., Grafton Street, Dublin.

B.—PARTICULARS.

I.—*Communications and Metropolitan Improvements.*—Outline Map showing (1) railways and tramways (with present penny fares limit); (2) canals, rivers, and docks (with depth and tidal limits); (3) main thoroughfares and industrial centres, with some notes on traffic and congestion; (4) public buildings and leading centres of resort. Industrial, transport, office, shopping, and residential quarters; (5) parks, gardens, open spaces, and large unbuilt areas.

II.—*Housing.*—1. L.G.B. report on inquiry into housing conditions in Dublin; (2) evidence of preceding, with map illustrative of present housing conditions, derelict sites, insanitary areas, corporation and private schemes, available sites, etc.; (3) outline maps, showing valuations and ground rents in small areas; density of population in small areas; death-rate in small areas.

Those entering the competition must forward the sum of £1 1s. to the Secretary, Town Planning Competition, Civic Exhibition, Linenhall Buildings, Dublin. This sum will be applied towards the cost of supplying books, maps, etc., to candidates.

NEWS ITEMS.

Elizabethan House in Devon.

The sale has been effected of Bovey House, Beer, South Devon. It is an Elizabethan house containing fine oak panelling.

Chester Infirmary and Wallasey Town Hall.

The new wing of the Chester Infirmary was formally opened last week by the King and Queen during their Majesties' brief visit to the city. Proceeding to Wallasey, the King there laid the foundation stone of the new town hall by pressing an electric button in Central Park, about a mile from the site of the new building.

British Museum Extension.

The new wing of the British Museum, which has been built at a cost of £200,000, is to be opened by the King and Queen on May 7. Portland stone has been used for the façade, the main entrance, however, showing a marble doorway, surrounded by granite, with a bronze door, of which the upper panels show figures in relief. Mr. J. J. Burnet, LL.D., R.S.A., is the architect.

Retired Builder's Fortune.

Mr. Joseph Harvey Trollope, of Beddington, Surrey, retired builder, formerly of Messrs. George Trollope and Sons, who died on February 10, aged eighty-five years, left estate of the gross value of £142,001 12s. 9d., of which the net personalty has been sworn at £140,672 7s. 10d. The testator empowered his trustees to make a present not exceeding one year's wages to each domestic servant or indoor or outdoor employee of five years' service.

Architect to Exeter City Council.

At a meeting of the Exeter City Council an architect for the City Surveyor's department was appointed. The Special Committee had considered 200 applications. Six applicants were selected to appear before the committee. One withdrew. From the five whom the committee interviewed three were selected to appear before the Council, and of these Mr. J. Bennett, aged thirty-seven, architect in the Borough Engineer and Surveyor's office, Bolton, was appointed to the post.

Cementing Qualities of Filter Dust.

The filter dust which is obtained as a by-product in the Halberger-Beth gas-cleaning system is reported to have exceptional binding qualities, and the use of about 5 per cent. in briquetting iron ore or concentrates is suggested. This filter dust is a greyish powder similar to cement, and is composed mainly of silica, alumina, and lime, but only a small percentage of iron. It is not exactly known how the dust is formed, but it is believed to be largely a condensation product of volatilised slag. Its specific gravity is 2.37, though a cubic foot weighs only 18.7 lb. It has been mixed with Portland cement, and, probably due to its extreme fineness, has been found to give increased cementing qualities. A furnace blowing 50,000 cubic feet of air per minute is said to produce from 12 to 20 tons of filter dust per day, sufficient to briquette 240 to 400 tons of ore per day.

Mural Decorations by Commendatore Walter Crane.

The four lunettes for the decoration of the dome of the reception-room of the recently-reconstructed Royal West of England Academy, Bristol, were recently completed. They are the work of Commendatore Walter Crane, who received the commission as the result of an open competition, the judges, Professors Moira, Pike, and Lethaby, of the Royal College of Art, selecting his designs from those sent in under seal. Two of the lunettes, "Painting" and "Craftsmanship," were in their places when the Academy was reopened last October, and the other two, "Architecture" and "Sculpture," were previously shown at Leighton House.

Housing and Town Planning Conference, Llanelly.

A conference of representatives of local authorities of West Wales—called under the auspices of the National Housing and Town Planning Council, the Welsh Housing Association, and the South Wales Garden Cities and Town Planning Association—was opened at Llanelly last week. The designing and construction of rural cottages was the first question considered, and a memorandum written by Councillor Harold Shawcross, J.P., chairman of the Executive Committee of the National Housing and Town Planning Council, was discussed. A similar memorandum on town dwellings suggested that not more than twelve of these should be built to the acre, and this idea was vigorously combated on economic grounds. Mr. David Harries, an ex-Mayor of Swansea, presided.

New Darlington Church.

On March 25 Alderman A. F. Pease laid the foundation stone of St. Luke's Church, Darlington, which is to be built on a site on the north site of Corporation Road. When completed it will comprise a nave 71 ft. by 30 ft. and 43 ft. in height, with north and south aisles 12 ft. wide. The chancel will be 33 ft. by 27 ft. and 37 ft. in height, and a chancel aisle 15 ft. wide, which might afterwards be used as a morning chapel. The present scheme includes a completed nave with arcades on each side, with temporary passage aisles, chancel, and vestry. The estimated cost of that portion is about £4,000. The stone was laid by Mr. Pease with the aid of a silver trowel handed him by Mr. Moscrop, jun., on behalf of the architects (Messrs. Clark and Moscrop, Darlington), and with
a mallet made from oak from the anc
roof of Aycliffe Church. The chief
tractors are Messrs. R. T. Snaith and
and J. Guthrie and Son, all of Darling

BOOK NOTICES.

An Elementary Manual of Mason

A new elementary text-book on mas
was rather badly wanted, and Me
Longmans have supplied one that i
once cheap and, within the limitation
author has set himself, quite thorc
After describing and illustrating the
and machines commonly in use by ma
the author devotes a chapter to the
version of stone—sawing the block,
ing on it a plane surface, squaring, r
ing, working moulds, scribing a n
sinking a panel, working springers
caps, and other operations. An exc
chapter on drawing and setting-ou
cludes a large number of very clear
grams illustrating in profile the va
mouldings, as well as the method o
ting out raking moulds and the va
types of arches. Constructional details
erection and fixing, are treated at
siderable length, and with the thor
knowledge of a working mason. Mat
are summarily described, and there
long chapter on stereotomy—"the
cutting solids into sections of suitabl
and shape"—which, we regret to lea
the authority of the author, invol
knowledge of practical geometry th
seldom possessed by the average m
This cheap and excellent manua
draughtsmen and craftsmen will be
boon to them.

"Masonry: An Elementary Text-book for S
in Trade Schools, and Apprentices." By Ge
Barham. With illustrations. Pages viii. +
ins. by 5 ins., price 2s. 6d. net. London: Lon
Green & Co., 39, Paternoster Row.

Dilapidations and Fixtures.

Of the many opportunities for dis
ment in which buildings abound,
which arise from differing estimates
dilapidations and fixtures are sure
most prolific of trouble and vexation
comer and outgoer, landlord and t
are perennially at variance as to th
spective rights and duties in these m
and from the immense mass of liti
that has consequently accrued—a
"cases cited" in the book under
runs to seven pages—there have be
duced certain principles and axiom
which it is good for architect and
landlord and tenant, to be reasonabl
acquainted. That Messrs. B
Fletchers' book on the subject is
proved utility is obvious from the fa
it is now in its seventh edition. I
cess is not surprising, for it meets
admirably the need for clear and
guidance on the multifarious and c
aspects of dilapidations and fixtures
ing not merely with such abstracti
rights, liabilities, and covenants
general questions of law, but also w
more practical matters of "ta
measuring, scheduling, and as
dilapidations. The present editio
been brought up to date by thorou
vision, and has been in great p
written, with, of course, the incorp
of recent important decisions.

"Dilapidations and Fixtures." A Text
Tabulated Form for the use of Architects, Su
and others. By Professor Banister Fletcher, F.
Seventh edition, revised and largely rewr
Banister Flight Fletcher, F.R.I.B.A., Barriste
and Herbert Phillips Fletcher, F.R.I.B.A., B
at-Law. Pages xxii. + 192, 7½ ins. by 5¼ i
6s. 6d. London: B. T. Batsford, Ltd., o
Holborn.

CIETIES AND INSTITUTIONS.

ROYAL ASIATIC SOCIETY.

The Development of the Dome.

r. K. A. C. Creswell read a paper at
Royal Asiatic Society on April 7 on
ıe History and Evolution of the Dome
ersia.''

ıe Persians, he said, were the first
le to devise a satisfactory "penden-
" whereby a really large dome could
et over a square chamber, a problem
Romans failed to solve. He described
lomes of the palaces of Firuzabad and
istan, and placed the former before
230, thus reversing the usual order of
two palaces, on account of the simple
ning of the former, at the same time
ting out that all the structural affinities
arvistan were with seventh and eighth
ıry buildings in Mesopotamia. In the
d from the rise of Islam to A.D. 1400
ited the dome of the mausoleum at
anieh as the finest example, as it is
t. in diameter and of very scientific
e.

ter Timur's return from the siege and
of Damascus, a new type appeared,
with an inner and outer shell, like the
of St. Paul's. This, the lecturer
ested, was copied from the wooden
of the Great Mosque at Damascus,
h, in the fourteenth century, had a
of this type. He also suggested that
me to be adopted for the sake of its
nal effect. This dome spread over
ia and appeared in India in the six-
h century. In Persia it was either
ed with *faïence*, or, in the case of
d shrines, with gilded tiles, which, in
lear Persian atmosphere, can some-
be seen flashing thirty miles away.
ter 1700 its external outline became
, culminating in the bulbous domes
during the last century.

LEICESTER SOCIETY OF ARCHITECTS.

e Leicester and Leicestershire Society
rchitects had a "students' evening"
e society's rooms in St. Martin's, last
. The president, Mr. A. H. Hind,
in the chair.—An address upon
mes" was given by Mr. A. J. Wood,
, R.I.B.A., and Mr. C. J. M. Cowdell,
I.B.A., dealt in very interesting
on with a sketching tour in Nor-
ly. The papers were illustrated by
rous sketches and drawings. Diploma
ings accepted by the R.I.B.A. for the
l" examination were lent for exhibi-
by Messrs. Barrowcliff, Matthews,
l, and Woodhouse.—A vote of thanks
accorded, on the motion of Mr. Ellis,
ded by Mr. Grewcock.

PSHIRE AND ISLE OF WIGHT SOCIATION OF ARCHITECTS.

general meeting of the Hampshire and
f Wight Association of Architects was
at Southampton, Sir William Portal,
, presiding. At the conclusion of the
ess meeting a visit was paid to
rs. Pirelli's premises, now in course of
ion on the reclaimed foreshore, Alder-
Weston (of Messrs. Weston and Bur-
the architects) conducting the party
the buildings, and explaining the de-
of the construction of the new cable
s. The building, as he explained,
an interesting example of the latest
opments in modern reinforced con-
construction, and one of its features
hat only artificial stone was used, and there was practically nothing to burn. No fewer than 670 concrete piles had been sunk, and the floor space of the premises when completed would be four acres, three on the ground floor and one on the first floor. Afterwards the party reassembled at the Hartley Hall, where, Sir William Portal presiding, Councillor S. G. Kimber delivered an interesting address on "Westminster Abbey," illustrated with lantern slides.

BRISTOL SOCIETY OF ARCHITECTS.

At the annual general meeting of the above society, held at Messrs. Fortt's, the Promenade, Clifton, the election of the officers for the session 1914-15 resulted as follows: President, Mr. G. C. Awdry, F.R.I.B.A.; vice-presidents, Messrs. G. H. Oatley, F.R.I.B.A., and J. Foster Wood, F.R.I.B.A.; honorary secretary, Mr. C. F. W. Dening, F.R.I.B.A.

ASSOCIATION OF BUILDERS' FOREMEN AND CLERKS OF WORKS.

Mr. J. W. Sawyer is now the secretary of this Association, whose offices are at 56, Old Bailey, E.C. Mr. Sawyer's private address is 214, Clapham Road, Stockwell, S.W.

PORT OF LONDON AUTHORITY'S HOUSING SCHEME.

With the huge extension of the Port of London Docks an increase in the housing accommodation of the workers has become necessary, and plans have now been sanctioned for the erection of 164 houses on part of the Prince Regent Lane Estate, which, being in both West Ham and East Ham, is within easy reach of the docks.

In addition to building houses for new workers, the Port of London Authority has to provide houses for the families displaced by the dock extension, and these dwellings are to be completed by the middle of next November.

Alderman Hosking, chairman of the works Committee of the West Ham Town Council, in an interview with a representative of the "Westminster Gazette," said that the White Hart Lane estate of the London County Council had been mentioned as an example of what might be done by the Port of London. The committee, however, considered that the average of twenty-six houses to the acre was too great, and suggested twenty; but ultimately it was agreed to initiate the housing scheme with twenty-two dwellings to the acre. Eight hundred and twenty persons, said Alderman Hosking, will find homes in the 164 houses, of which 57 will have three rooms, 82 will have four rooms, and 25 will have five rooms.

These figures are a considerable modification of the original proposals, and represent less than one and a half persons per room, as compared with an average of two persons per room at White Hart Lane.

The roads, as required by the local authority, will not be less than 40 ft. wide, and for the three-roomed houses there will be a frontage of not less than 15 ft., and the houses are to be set back not less than 10 ft. from the roadway.

There will be small garden plots, kept gay with ornamental flower-beds by the Town Council, in various parts of the estate, and it is hoped that the tenants will follow this example in their front gardens.

LAND ENQUIRY COMMITTEE'S SECOND REPORT.

Another long report, this time dealing with urban land, has been issued by the Land Enquiry Committee, and drastic changes are recommended.

On the housing question, the Committee state that the evidence before them shows that the majority of the urban population have to live in houses which are overcrowded to the acre, which are built in long, dull rows without sufficient open space, and in addition are often defective in various ways; while one-tenth of the population have to live under conditions of gross overcrowding. They point out that there is a shortage of dwellings in probably half the towns of England and Wales and that probably between 5 and 10 per cent. of urban workmen live in slums.

The Committee put forward fifteen recommendations on the housing question. They recommend that it shall be the duty of local authorities to see that adequate and sanitary housing accommodation is available for the working class population, that every local authority shall prepare a planning scheme for its entire area, and that where sites are not available for houses at reasonable prices local authorities shall be obliged to promote transit schemes to render accessible a sufficient area.

Since the unsatisfactory housing conditions are, the Committee state, largely due to the presence in nearly every town of persons unable to pay an economic rent, it is recommended that the Government shall take means to secure that a minimum wage shall be fixed for all low-paid wage earners, and also take steps to regulate the labour market with a view to decreasing the amount of casual employment.

In regard to the provision of land, the Committee recommend that for certain specified purposes land should be acquired compulsorily by means of a resolution passed by the local authority requiring the land.

Concerning tenure, the Committee favour the complete abolition of the copyhold system and condemn the short leasehold system. Their recommendations lay down that leaseholders under the short leasehold system should have security of tenure. In cases where, in the public interest, continuity of tenure is undesirable, the lessee should be compensated for the unexhausted value of buildings and improvements, and in the cases of business premises also for loss of goodwill and the cost of enforced removal.

The power to veto improvements and alterations should no longer be an absolute one, but should be subject to review by an impartial tribunal.

On the question of rating the Committee make some far-reaching recommendations. They propose that all future increases in local expenditure should be met by a rate upon site values. Further relief, amounting possibly to as much as five million pounds, should be granted to local rates out of Imperial taxation, and this relief should be given by means of grants which could be withheld from any local authority which failed to perform its duties satisfactorily.

Obviously this report contains much contentious matter, and several of the points in it have been eagerly pounced upon as material out of which political capital, for one side or the other, could be easily made. It is a great pity that the vital interests involved cannot be entirely withdrawn from the arena of political conflict.

CONCRETE AND STEEL SECTION.

(MONTHLY.)

NEUTRAL AXIS AND MOMENT OF INERTIA OF REINFORCED CONCRI AND OTHER SECTIONS.

BY F. E. DRURY, F.I.S.E., M.C.I.

(Head of the Department of Building and Structural Engineering, Royal Technical Institute, Salford).

(Concluded from page 215, No. 1003.)

Reinforced Concrete Sections.

We are now in a position to deduce the value of I for sections of two materials such as are employed in reinforced concrete.

Accepting the usual and well-established theory of reinforced concrete, we have:—

(*a*) The materials act *together*, and by adhesion strain equally where in contact.

(*b*) The *strain* governs the *stress intensity*, therefore the stresses in the two materials vary as the modular ratio "m," $= \frac{E_s}{E_c}$ (usually 15).

(*c*) In beams, and members of *one* material under bending stress, stress varies directly as the distance from N.A., therefore at *equal distances* from N.A., stress in steel will be "m" times that in the concrete and be *proportionate to this at different distances.*

(*d*) That concrete be not considered to assist in providing tensional resistance.

It should be clear that if the steel takes "m" times the amount of stress that *an equal amount* of concrete would take in the *same position*, we may conceive the steel to be replaced by "m" times its amount of concrete, always bearing in mind that in compressional areas, where the concrete is doing useful work, the *increase* in area by such replacement is (m — 1) times the area of steel, because the vacant space must first be filled with concrete.

When a symmetrically reinforced section is used as a column its neutral axis is through the centre of the section, because steel and concrete act together in doing useful work throughout the section under normal conditions.

Beams, however, are entirely unsymmetrical about a horizontal axis because the concrete above the N.A. *only* is recognised as doing useful work in resisting bending moment; hence, if the reinforcement was conceivably arranged in symmetry with regard to the horizontal axis the exclusion of tensional concrete destroys the symmetry. Thus the "equivalent area of concrete" having the same M_R as the original steel and concrete section is unsymmetrical. The equivalent area (A_e) must be conceived in each case if the N.A. is to be found.

Neutral Axis in Beams.

The position of N.A. is of fundamental importance, it having been shown to govern the correct estimate of the value of the resistance couple. Its distance from the top edge is determined by *equating the moment of the equivalent "total area" to the sum of the moments of the several elementary areas,* or, by dividing the depth so that the *moments of the equivalent areas above and below are equal.*

We shall use either of these propositions as required.

Example I. Find the position of the N.A. in Fig. 9. Let "n" be the distance of N.A. from the top edge, and "d — n" be the distance from reinforcing plane. Let $m.A_t$ = the equivalent area of concrete to replace the tensional steel.

Take moments about N.A., then:—

$$(b.n)\frac{n}{2} = m.A_t\,(d - n) \qquad (1)$$

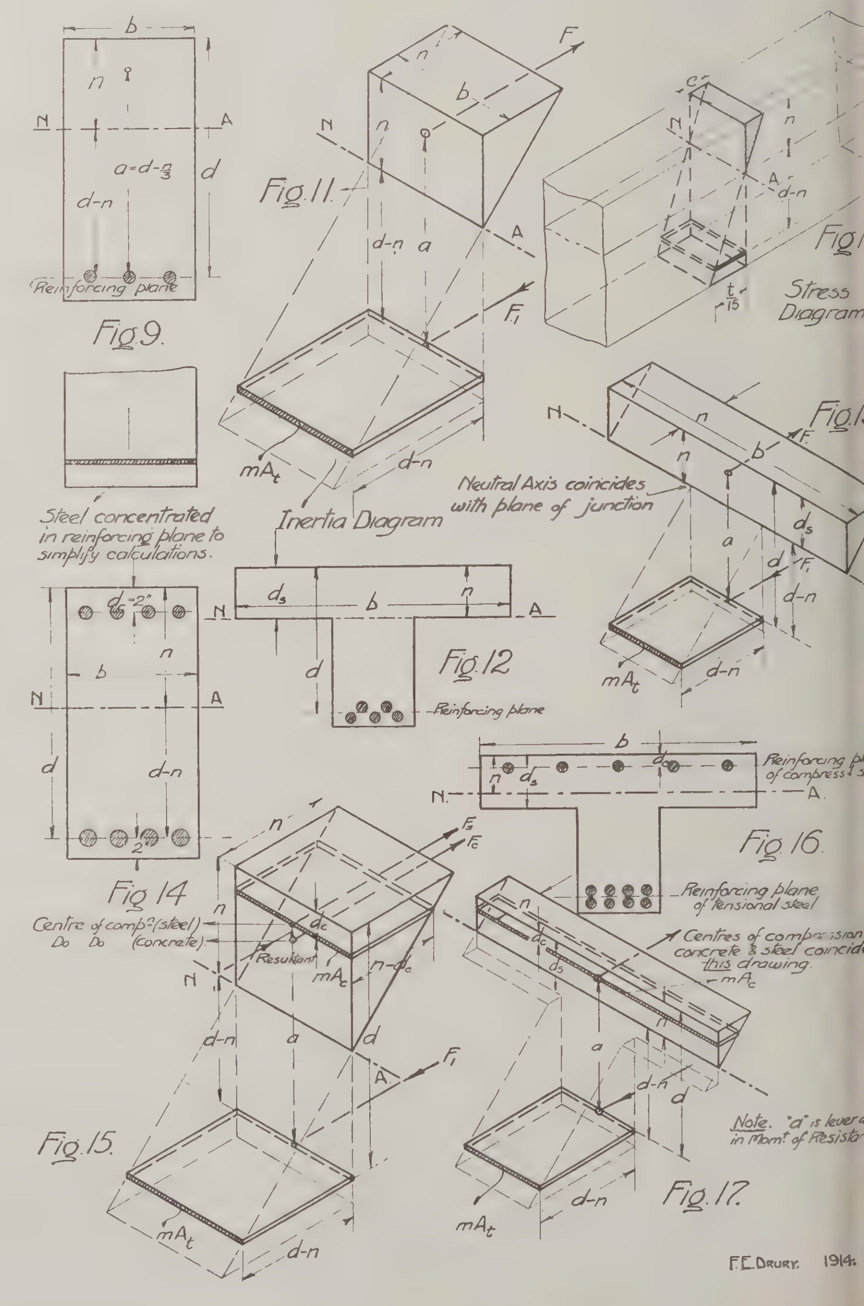
$$\therefore \frac{bn^2}{2} = mA_td - mA_tn$$

$$\therefore n^2 + \frac{2mA_tn.}{b} - \frac{2mA_td.}{b} = 0$$

$$\text{and } n = \frac{mA_t}{b}\left(\sqrt{1 + \frac{2bd}{m.A_t}} - 1\right)$$

on solving and factorising. This m regarded as a *general* statement for reinforced ☐ and **T** beams, if the have the N.A. within the slab.

If the amount of steel is to be expr as a ratio of "effective area" of co



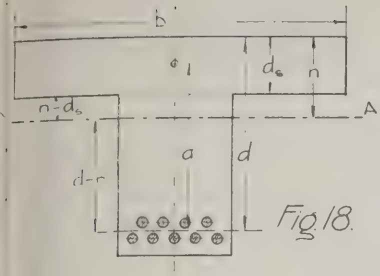


Fig.18.

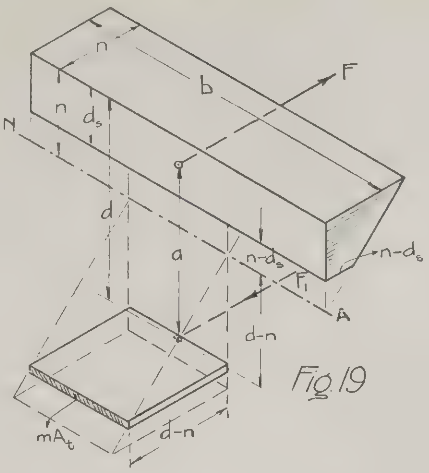


Fig.19

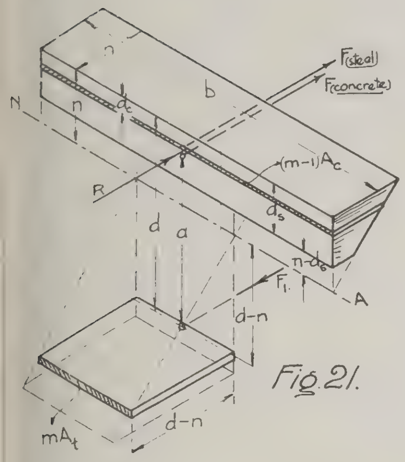


Fig.21.

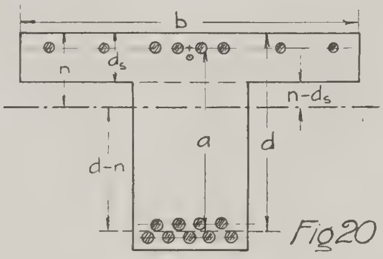


Fig.20

F.E.DRURY. 1914.

d), let r = ratio. Then $\frac{A_t}{bd}$ = r., and

: r.b.d.

ıere r is known the above "general" ession for the position of N.A. may ritten

$$= \frac{m.r.b.d.}{b}\left(\sqrt{1+\frac{2b.d}{m.r.b.d.}}-1\right)$$

$$= m.r.d\left(\sqrt{1+\frac{2}{mr.}}-1\right) \qquad (4)$$

ı is the common formula in use for urpose.

fore passing to the next case notice Fig. 10 shows the stress distribution am and Fig. 11 the inertia diagram ıe above case. In either diagram if teel represented be increased to "m" its present sectional area, its *volume* s that of the concrete "stress" or tia" wedge by virtue of the equality oments as per equation (1), and ıse the expression of the volume e wedge exactly agrees with the ssion of the moment of area as d in connection with Figs. 5 and 8.

Double Reinforcement.

he beam be doubly reinforced so that steel occurs in the compressional the elementary law of stress distion must still operate and the steel be stressed proportionately to its nce from the N.A. and take "m" the stress in the concrete at the distance. Consider Figs. 14 and 15. place the steel on tensional side by times the amount of concrete and ıe compressional side by (m − 1) , then express moments about the or about the top edge. Try the latter od, which is simpler in this case. e = equivalent total area of concrete.

$$, A_e \times n = bn \times \frac{n}{2} + (m-1)\,A_c.d_c + m\,A_t\,d \qquad (5)$$

ıt $A_e = bn + m - 1.A_c + mA_t.$

$$n\left[bn + (m-1)\,A_c + mA_t\right] = \frac{bn^2}{2} + (m-1.)\,A_c.d_c + m\,A_t\,d.$$

and transposing and simplifying

$$n^2 + \frac{2}{b}\left[(m-1.)\,A_c + mA_t\right]n - \frac{2}{b}\left[(m-1)\,A_c.d_c + mA_t d\right] = 0 \qquad (6)$$

$$\text{and } n = \frac{1}{b}\left[(m-1)\,A_c + mA_t\right]\left(\sqrt{1+\frac{2b\left[(m-1)A_cd_c + mA_td\right]}{(m-1.A_c+mA_t)^2}}-1\right) \qquad (7)$$

In practical use this equation is only required to check the position of the N.A. and the consequent stresses developed in the steel and concrete in a completed design.

Example.—In Fig. 14 let $A_c = 3$ sq". $A_t = 6$ sq"; d = 20", $d_c = 2$" and b = 10" and m = 15.

Then :—

$$n = \tfrac{1}{10}(14\times3+15\times6)\left(\sqrt{1+\frac{20\left[14\times3\times2+15\times6\times20\right]}{(14\times3+15\times6)^2}}-1\right)$$

$$n = \tfrac{132}{10}\times{\cdot}78$$
$$n = 10{\cdot}3''.$$

Tee Beams.

Now investigate the T beam of Figs. 12 and 13. If the N.A. falls either *within the slab* or on the *plane of junction* the distribution of stress will be similar to Fig. 13, and if this be compared with the singly reinforced beam of Fig. 11 it will be seen that the resistance of the concrete is exactly of the same "nature of distribution," the compression being spread over a breadth equal to the breadth of the "tee."

Equation (3) for singly reinforced beams therefore applies in this case, and if the correct values be inserted as per diagram we have :—

$$n = \frac{mA_t}{b}\left(\sqrt{1+\frac{2bd}{mA_t}}-1\right)$$

or, if A = sectional area above reinforcing plane :—

$$r = \frac{A_t}{A}, \qquad rA. = A_t$$

$$\text{and } n = \frac{mrA}{b}\left(\sqrt{1+\frac{2bd}{mrA}}-1\right) \qquad (8)$$

Should the N.A. fall *below* the slab (because the small area of the leg gives little assistance to the compressive resistance) the resistance of the slab *only* is considered, as it simplifies the solution of the N.A. problem and of the M_R of the beam.

Before showing how to find the N.A. in a T beam heavily reinforced in tension, where the axis is below the slab, we must note how to determine which of the two cases arise. We have seen that in any case we must equate the moments of the equivalent areas about the axis and solve for the unknown distance from the edge of the beam; hence, if we do this in the case of the T, the position of N.A. will be determined by whether

$$\frac{bd_s{}^2}{2} \text{ is } =, >, \text{ or } < mA_t\,(d - d_s).$$

If equal, N.A. lies on the plane of junction as in Fig. 13.

If unequal, the N.A. lies on the side of greater moment.

In a T beam *doubly* reinforced as per Figs. 16 and 17, the N.A. lies *on* the plane of junction, *above* or *below* it according to whether

$$\frac{bd_s{}^2}{2} + (m-1)\,A_c\cdot(d_s - d_c) \text{ is } =, >, \text{ or } < mA_t\,(d - d\,).$$

This simple calculation determines which of the formulæ for determining the position shall be used, viz.: 3 (or its second form, 8) or 9, which immediately follows here.

When the axis falls *below* the slab the conditions are shown in Figs. 18 and 19, and, neglecting the short piece of the leg attached to the table (see previous note) we have :—

$$bd_s\left(n - \frac{d_s}{2}\right) = mA_t\,(d-n)$$

$$\therefore\ bd_s\,n - \frac{bd_s{}^2}{2} = mA_td - mA_tn$$

$$n(bd_s + mA_t) = \frac{bd_s{}^2}{2} + mA_td$$

$$\text{and } n = \frac{2mA_td + bd_s{}^2}{2(mA_t + bd_s)} \qquad (9)$$

$$\text{or, if } r = \frac{A_t}{A},\ rA = A_t$$

$$\text{and } n = \frac{2mrAd + bd_s{}^2}{2(mrA + bd_s)} \qquad (10)$$

T *Beams. Double Reinforcement.*

In T beams having double reinforcement, first determine whether N.A. is on, above, or below the junction. If above as per Fig. 17, then equation (7) applies, for the only difference in the condition is the increased width of "b," ∴ insert the breadth of table for b and solve the equation as before.

If N.A. is *below* the junction, Figs. 20 and 21, we must take moments and equalise them about a convenient line as before. Taking moments about the top edge, we have :—

$$A_e \times n = \frac{b\,d_s{}^2}{2} + (m-1)\,A_c.d_c + m\,A_td.$$

But $A_e = bd_s + (m - 1)A_c + m\,A_t$.

$$\therefore n = \left[\frac{(m - 1)A_c d_c + m A_t d + \frac{bd_s^2}{2.}}{(m - 1.)A_c + m A_t d + bd_s)}\right]$$

$$\text{or, } n = \frac{2\,([m - 1.]A_c d_c + mA_t d) + bd_s^2}{2\,([m - 1.]A_c + mA_t + bd_s)} \qquad (11)$$

Conclusions re N.A. We have now considered the fundamental basis for every case that may arise, and the student should note that if he possesses any knowledge of mathematics he is not called upon to memorise any of these formulæ. He may write down the fundamental equation of moments of equivalent areas, introduce the actual values at once, and solve the equation directly.

The above deductions are chiefly carried to a complete solution to show that the "standard formulæ" agree with these, whatever may have been the method of arriving at them.

Graphical Methods.—The position of the neutral axis for any given reinforced section may be quickly found by graphical methods and with sufficient accuracy for practical checking. These, however, would require a separate article.

Moment of Inertia, or Second Moment of Section.

It now remains to express for each of the reinforced sections illustrated herewith, the moment of inertia of the section.

Using the same "equivalent area" in each case, from which the position of the N.A. has been deduced, we need to express the "sum of the moments of the inertia wedges" built thereon, about the N.A.

In each example we shall have the inertia wedge for the concrete and one (or two) for the steel.

The concrete wedge has a moment agreeing with the inertia of a plane rectangle about one edge (see previous consideration) and is therefore always of the form $\frac{bn^3}{3}$.

The steel, being grouped practically all in the same plane, (distant $(d - n)$ and $(n - d_c)$ respectively from the N.A.), causes the stress set up in the steel to be almost uniform, and the resulting inertia wedge is really a thin layer of uniform length.

Conceiving it as a thin slice having mA_t (or $m - 1.A_c$) sq. ins. in sectional area, and $d - n$, (or $n - d_c$) from N.A. we have volume of "equivalent (steel) wedge." $= m.A_t\,(d-n)$ in tension and $(m - 1)A_c.\,(n - d_c)$ in compression, the steel in the latter case being concentrated at a distance d_c from the top edge of the beam.

The "*moment of the tensional steel*" about N.A. is therefore $m.A_t\,(d - n)^2$ and of the "*compressional steel*" $(m - 1).A_c.\,(n - d_c)^2$ These express ∴ the inertia of the steel.

Let I = moment of inertia about the neutral axis, then applying our deductions to the cases illustrated our results are :—

Beams with Single Reinforcement.

Rectangular Section, Figs. 9 and 11.

$$I = \frac{bn^3}{3} + m.A_t.(d - n)^2. \qquad (12)$$

Tee Beams. (1). Axis at plane of junction, or *within* slab, Figs. 12-13.

I = same as (12), where b = breadth of slab.

2. Axis *below* slab. Figs. 18 and 19.

$$I = \frac{bn^3}{3} - \frac{b(n - d_s)^3}{3} + m.A_t\,(d - n)^2. \qquad (13)$$

Beams with Double Reinforcement.

Rectangular Beams.—Figs. 14 and 15.

$$I = \frac{bn^3}{3} + (m - 1)A_c.(n - d_c)^2 + mA_t(d - n)^2. \qquad (14)$$

Tee Beams.—(1.) Axis at plane of junction, or *within* slab. Figs. 16 and 17.

I = same as 14, and b = breadth of slab.

2. Axis *below* the slab. Figs. 20 and 21.

$$I = \frac{bn^3}{3} - \frac{b(n - d_s)^3}{3} + (m - 1)A_c.(n - d_c)^2 + m.A_t(d - n)^2. \qquad (15)$$

Moment of Resistance.—We have previously seen that M_R can be expressed *generally* by $M_R = \frac{I}{y} \cdot f$, where f = extreme fibre stress and y = distance of those fibres from N.A.

In reinforced work the maximum stress in concrete is written "c" and distance of extreme concrete layer "n," instead of "f" and "y" respectively.

Therefore, with regard to the extreme stresses on the concrete being of a defined amount (while including the proportionate stress developed in steel at the same time) the moment of resistance is expressed as $M_R = I\,\frac{c}{n}$

Similarly, the stress maximum in the tensional steel is written "t" and its distance from N.A. "d − n". But I has been obtained on the basis of substitution of an equivalent area to the steel, and the stress in such "substituted concrete" would be $\frac{1}{15}t$, therefore $\frac{1}{15}t$ must be inserted as the maximum fibre stress on steel.

Thus with regard to the tensional steel,

$$M_R = I.\,\frac{\frac{1}{15}t}{(d - n)} = \frac{I.t}{15\,(d - n)},$$

if the stress in the tensional steel be known then the stress in the compressional steel (c_s) can be found, because stresses are proportionate to the respective distances from N.A. Noting these distances we have :—

$$\frac{c_s}{t} = \frac{n - d_c}{d - n} \quad \therefore \quad c_s = \frac{t(n - d_c)}{d - n.}$$

In any case, then, if I be calculated in inch units about the N.A. we have all the information necessary to express the Moment of Resistance of the section and we may then insert the limiting value of c (or t) as required.

According to the position of the N.A. either material may reach its maximum working stress while the other only partially develops it, hence care must be taken to calculate the working M_R with due regard to this condition.

In computing the working M_R note that *one* relative position of N.A. *only* allows full development of both limiting stresses. Suppose we settle these as 600 lbs. per sq. in. on concrete and 17,000 lbs. per sq. in. on steel, then

$$\frac{n}{d - n} = \frac{c}{\frac{1}{15}t}$$

$$\text{,,} \quad = \frac{15 \times 600}{17{,}000} = \frac{9}{17}$$

$$\therefore 17\,n = 9d - 9n$$

$$26\,n = 9d$$

$$\therefore \quad n = \frac{9}{26}\,d \text{ or } \cdot 346d, \text{ which is}$$

roughly one-third. The ratio of "
"d" should be worked out similar
any limiting values we may des
adopt as working stresses.

If "n" be > ·346d, concrete reac
maximum first and M_R (working) =

If "n" be < ·346d, steel reach
maximum tension first and M_R (wo

$$= \frac{I.\,t}{15\,(d - n)}$$

Careful study and application
checking of practical designs will
make the student quite clear o
method of finding the position
N.A. and expressing the numerical
of I, and a thorough knowledge o
branch of the subject will avoi
necessity of memorising formula
vised by various methods. It fi
enables one to calculate deflection ap
mately as described below in brief o

Deflection of Reinforced Concrete Be

The deflection of any beam hav
constant cross section (and the
constant moment of inertia) ma
obtained by the well-known formu
the form $\delta = \frac{nWL^3}{EI}$ where "n"
with the manner of support, W i
total load, L the span in inches, E Y
modulus, and I the moment of inert

The ordinary formulæ do not
with accuracy to reinforced co
beams where the disposition o
reinforcement is varied (and als
amount) to suit the varying be
moment and assist in resisting shea
diagonal tension, but an approx
result may be obtained when I is k
for the principal cross section.

"E" must be taken as the valu
concrete, because I has been obtaine
an "equivalent area" of concrete,
averages 2×10^6 lbs. per sq. inch
varies largely.

Although deflection may be calcu
from known fibre stresses and dep
beam, the above standard formu
preferable.

The values of "n" may be obt
from any structural engineering
book.

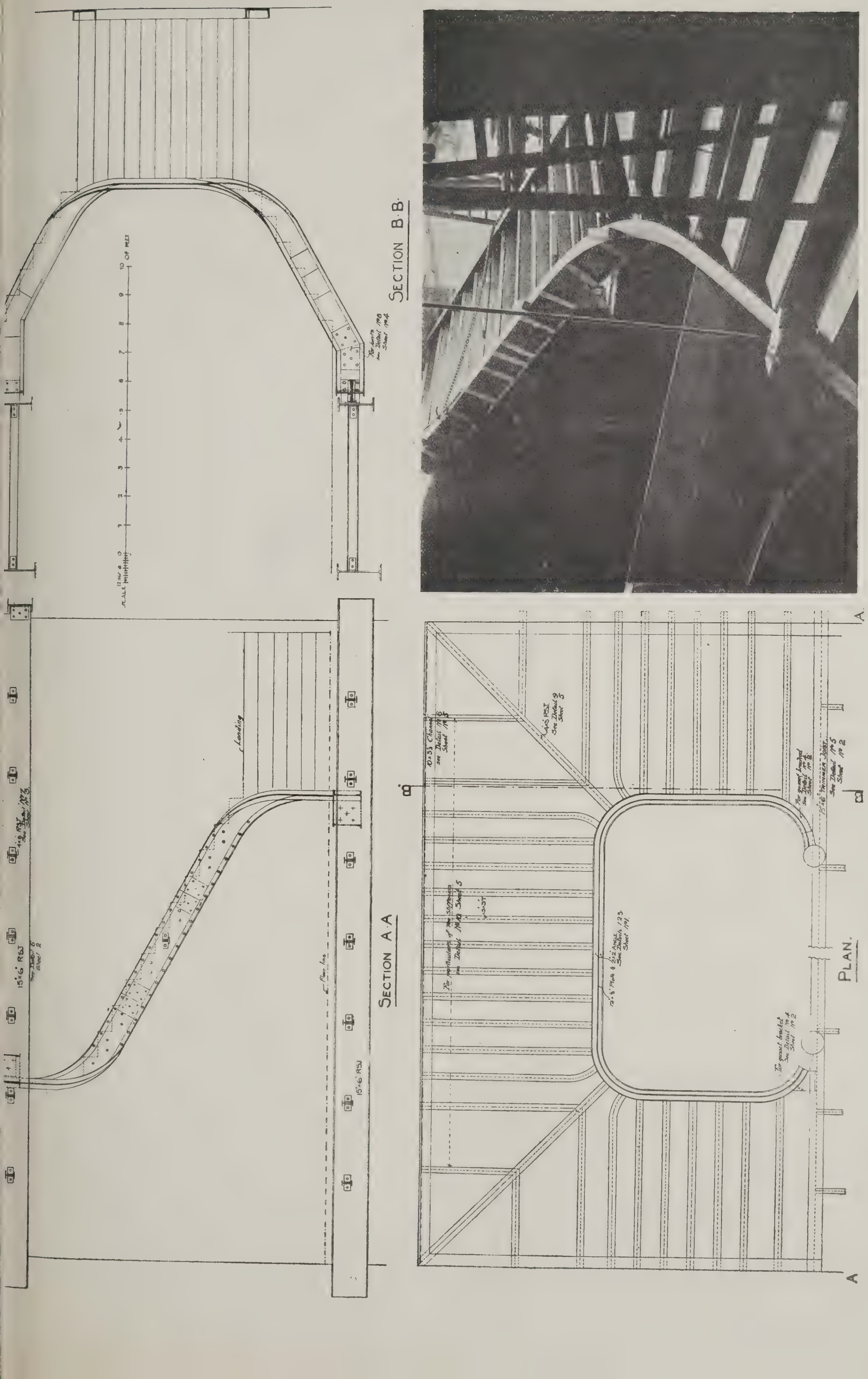
Because of the large variation of E
ferred to above, it is little use attem
to obtain exact results by consid
the differences due to changing
section.

CONSTRUCTION OF A MOD
STEEL STAIRCASE.

In designing the steel constructio
a staircase having continuous strings
large radius corners at the half-space
landing levels, it becomes necessa
adapt the design to conceal the steel
in the string and at the same time t
tain an efficient carriage for the cons
tion without intermediate support.

The photographic illustrations
show a staircase in course of erection
complete, and the plan the design o
steel construction of the stairway fro
first to the second floor of the buil
The difficult process of bending
steel joists and channels has been avo
The inner, or well hole, string was
posed of 12-in. by ½-in. steel plate
four times to 20-in. radius and ra
on two bends. After the co

Continued on page 290.


Section B.B.
Scale 12 inches 0 1 2 3 4 5 6 7 8 9 10 feet
Section A.A
Landing
15'×6' R.S.J.
15'×6' R.S.J.
Floor line
Plan.
10×3½ Channel See Detail No 6 Sheet No 3
4×3 R.S.J. See Detail 9 Sheet 5
15'×6' Trimmer Joist See Detail No 5 Sheet No 2
For gusset bracket See Detail No 4 Sheet No 2
12'×¾' Plate & 3½×2 Angles See Details 1,2,3 Sheet No 1
For particulars of the Stiffeners see Detail No 10 Sheet 5
Joist
A
A
B
B

A MODERN STEEL STAIRCASE. F. E. WILLIAMS, ARCHITECT. (STEELWORK DESIGNED BY HIGGS AND HILL, LTD.)

radius and pitch were obtained, two 2-in. by 2-in. by ⅜-in. angles were forged and fitted to top and bottom edges of the 12-in. by ½-in. steel plate, and riveted with ⅝-in. rivets at 6-in. pitch, thus forming an I section and giving the necessary stability in the horizontal plane. The joints in the string plate are suitably fish-plated and riveted with ¾-in. rivets. The string is fixed to the trimmer joist at each floor with gusset brackets riveted to string and bottom to the beam.

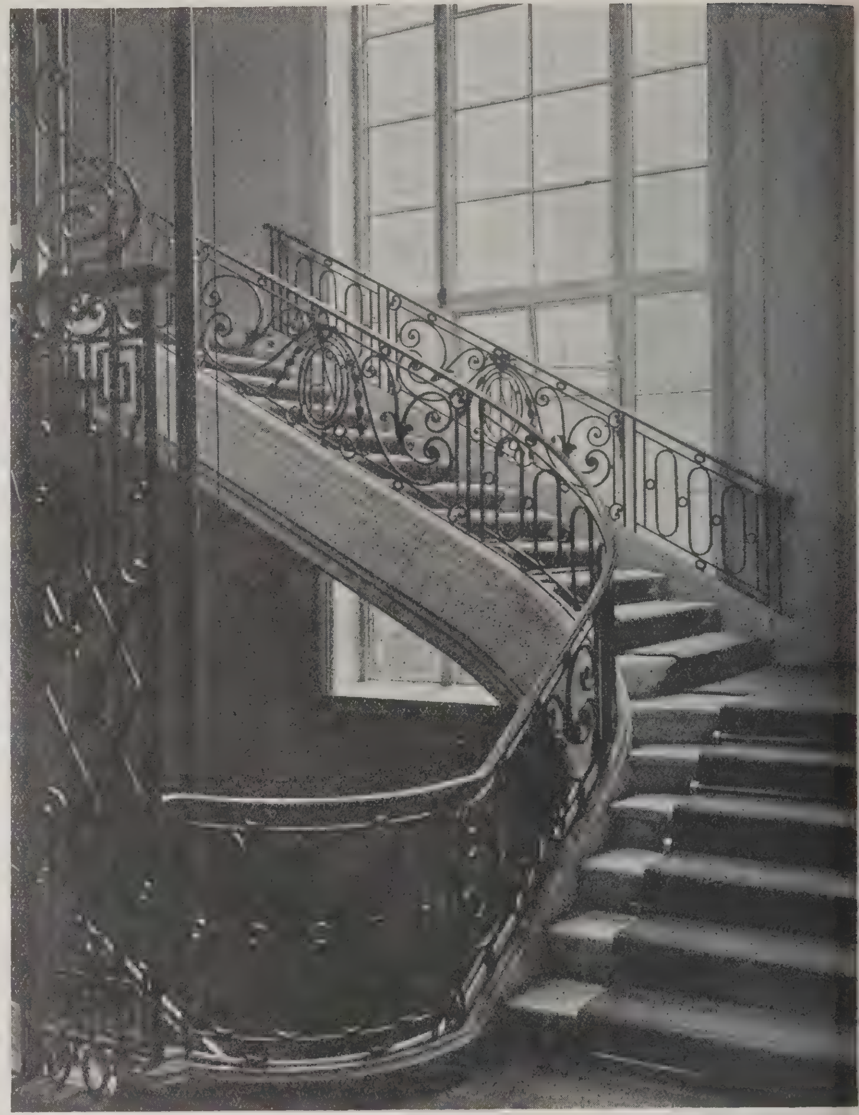
The outer, or wall, string is a 10-in. by 3½-in. rolled steel channel cut to proper pitch and bevel, fish-plated at joints, and built into wall at each end. A 3-in. by 3-in. by ½-in. steel tee stiffener for each step is cleated to the inner and outer strings, forming the reinforcement for the steps and at the same time giving stability to the continuous strings. The half-landings have a similar construction, with additional rolled steel joists as required.

After the steel construction was fixed expanded metal lathing of large mesh was fixed to the steel tee stiffeners, giving a continuous reinforcement to the concrete and allowing the centering to be removed sooner than would otherwise be possible.

The decorative finish of the stairs consisted of marble treads and risers, and the concreted strings were coated with stuc, giving the effect of great stability of construction combined with graceful lines.

It may be added that brackets were bolted to the strings to finish flush with the finished face to which the iron balustrade was fixed.

The staircase was executed by Higgs and Hill, Ltd., who were also responsible to the architect, Mr. F. E. Williams, for the design of the steel construction.



A MODERN STEEL STAIRCASE. F. E. WILLIAMS, ARCHITECT.

CONCRETE AND REINFORCED CONCRETE DONT'S FOR ARCHITECTS.*

BY JOHN A. DAVENPORT, M.Sc., A.M.Inst.C.E.

Concrete.

Concrete may be defined as an artificial stone made by mixing together broken stone, sand, cement, and water, the resulting semi-fluid mass being poured into moulds and allowed to set hard. This definition allows a comparison to be made between solid stone and stone built up either as masonry or as concrete. Comparing a cube of solid stone with cubes built up of regular and irregular pieces, it can be shown that the strengths of the latter will equal that of the former provided the voids are filled with material as strong as or stronger than the stone, and any spreading is prevented. A suitable filling is provided by Portland cement mortar, and the spreading may be prevented by an internal force provided by cement, an external force provided by a band or hoop, or a combination of internal and external forces provided by cement and hoop. The first method results in plain concrete, the second method is inapplicable to concrete, while the third method results in hooped concrete, which, naturally, is stronger than plain concrete.

The filling of the voids is best done by using stone shaped to fit the corresponding spaces, but as this is impracticable, a number of different sized stones must be used to fill the spaces for which they are suitable, thus cutting down the resulting volume of voids to a minimum. The voids to be filled with sand should be dealt with in the same way, and thus it follows that good concrete can only be made with graded sand and coarse material, and these should be very carefully proportioned.

Concrete must not only be strong, it must possess certain water-resisting, fire-resisting, and other properties in addition, and this leads up to the choice of suitable coarse material. Provided care is exercised in the choice of materials, concrete can be made as waterproof as it is possible to make it under any circumstances.

Having chosen the best possible materials, and having graded and proportioned them accurately, they require to be carefully mixed till the whole mass becomes uniform, and this can best be done by machine mixing. The failure of concrete is often due to bad mixing, and not to materials or proportioning. After mixing the concrete should be carefully laid, well tamped, and while setting and hardening kept free from vibration.

Centering.

Centering should receive as much thought and care in its design as does reinforced concrete, as it must be strong enough to carry dead weight and resist semi-fluid pressure; it should be capable of being easily and quickly removed without damage to the work, and it should be capable of being removed in a particular order with a view to accelerating hardening of the concrete without adv affecting its strength. The time of l concrete should be very carefully not a log-book, so that there should b ambiguity about the time of striking safety.

For moulded work a cheap and goo can be obtained by using plaster of moulds, struck out with templates, supported on wood backing or framin

Steel.

High carbon and mild steel are used, the former as a mechanical bond When it happens that porous concre used great care must be taken to coa bars with a cement wash to prevent rosion, and in all cases bars must n allowed to be displaced by careless men after once being fixed. In the of alterations regarding the steel in job, these should only be carried o expert advice.

Fireproofing.

The practice of fireproofing is found three fundamental facts, viz.:

1. A fire may originate outside a b ing.

2. A fire may originate inside a buil

3. The resistance of any building t is the resistance of its least resistant p

The fighting of fires is the work o municipal authorities, but applia

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* Summary of a Paper read before the Liverpool Architectural Society on March 23, 1914.

ld always be available to deal with an
reak on the spot.
reproof walls, roofs, and partitions
ld be used to prevent spreading, but
would be of little use if the coverings
ndows, doors, and other openings were
as strongly resisting as the rest. After
ising the fire attention must be paid
e protection of all structural members,
her built of steel, wood, or stone, and
est material to use is concrete. But
protective coat must be of uniform
ness for best results, and this pro-
s the bedding of pipes, ducts, etc.,
ein. The object of the coat is the pro-
on of the steel, and therefore there
be no passage for the heat to flow
the outside to the inside by way of
plugs, metal projections, or other
s of mischief.

Economical Design.

onomy depends upon cost of materials
cost of labour, which will vary from
to time; but these may be taken at
nt-day values for comparison.
ecting all question of architectural
my, the cost of the engineering struc-
is affected chiefly by the lay-out or
ngement; next by the relative amounts
ncrete, steel, and timber; and also by
hapes of the sections used. The most
omical job is given by the use of thin
supported by beams of short span,
whole being reinforced with steel of
ntage slightly higher than the theo-
lly economical percentage. Uni-
ity of sizes makes for economy, as
dissimilar sizes much time is taken
arning to put in the steel and con-
expeditiously. Other things of im-
nce to economical design are the
e of suitable and cheap aggregates,
he adoption of steel sizes which can
rchased cheaply, and be worked and
led easily. A list of concrete and re-
ced concrete don'ts, bearing on the
s raised in the paper, was given, and
of reinforced concrete failures, the
g down of a reinforced concrete build-
nd the erection of reinforced concrete
ings were shown and described by
ecturer.

Discussion.

ring the discussion which followed,
g other points raised, the lecturer
asked whether waterproofing com-
ds were necessary and good, to which
plied that concrete could be made
proof without the aid of foreign
r of any kind, but it required careful
ng, on the lines suggested in the
. The fact that good materials do
lways produce good concrete does not
that it cannot be made waterproof,
nly that the method of manufacture
right.
other point of interest was raised by
eputy City Building Surveyor, who
ed the design for the Royal Liver
ng. He said that he was not satis-
s a result of his calculations, based on
.I.B.A. Report, and a test floor was
and tested, giving a factor of safety
. This bore out the lecturer's re-
s on failures in which occurred the
nce: "The failures from bad design
w in number, due, no doubt, to the
hat official rules and regulations, at
nt in force, are exceedingly
ent."

eral Booth Memorial, Nottingham.

vas decided at Nottingham to proceed
he building, at the cost of £6,000, of
morial hall to General Booth, the
er and for many years the chief of
alvation Army, who was a native of
ty.

THE FIRE RESISTANCE OF REINFORCED CONCRETE FLOORS.

A report has been issued by the British Fire Prevention Committee (Red Book, No. 188) dealing with a fire test on a reinforced concrete floor with triangular lattice reinforcement, presented by Messrs. Naylor Bros., of Huddersfield. The prefatory note to the report indicates that in comparison with other floor tests the instructive feature of this investigation is that granite chippings do not appear so satisfactory from the fire point of view as some of the other materials that have been used in the committee's tests, and, further, that the question of protecting the soffit of the reinforced concrete beams requires careful attention.

It speaks well for the system of construction and the form of reinforcement used that, regardless of what appears to have been an unsatisfactory concrete aggregate, the floor stood up well and obtained the committee's classification of "Full Protection, Class B," which means a four-hour test with temperatures reaching 1,800 deg. F., followed by the application of water from a steam fire-engine. It is obvious that if a better form of concrete had been used and the question of protection had received more consideration, an even better result with less deflection must have been obtained.

Some thirty floors have now been tested by the committee, of which about half were proprietary floors and half floors in common use.

FORMS FOR CONCRETE WORK.

In a paper on this subject read by Mr. Allan Graham before the Concrete Institute the author said that formwork, the name given to all kinds of moulds or centering set up to give shape to the concrete or similar plastic material, is the term generally used in America, and there is a consensus of opinion in favour of its use as an inclusive term owing to the real meaning of the term "centering" having a more limited application than usually attributed to it. As the word "form" is the same, and has the same meaning in French, German, Italian, and Spanish, the author believed himself on safe ground in accepting it. The term certainly has great merit, being superior to such terms as falsework or shuttering. Although it is not the practice, in England, at any rate, for engineers to design their forms, that being generally left to the contractor, it is the author's belief that an engineer, for his own protection, should at least set out some typical portion of the forms for the contractor's guidance, thus doing all he can to circumvent failure in this direction at any rate.

The contention that the engineer should prepare the design of formwork has much to recommend it. An engineer will generally have no hesitation in setting out the design of centering for a bridge or other equally important work, but for some reason or other the design of ordinary formwork, which plays such an important part in the cost of reinforced concrete is never considered. There is no doubt that a thorough understanding of the principles underlying the everyday practice of concrete form design is one worthy of the best engineering talent. With this understood the problem can be analysed, the requirements relaxed, and the design decided upon that will be the most economical and efficient, giving due consideration to the economy of materials.

It is not merely that a design is required for a specific case which will safely support a certain volume of concrete, it is rather the problem of designing a set of forms which can be erected, taken down, and many times re-used during the progress of work. The factors involved are many, such as the type of centering, the kind of timber, how much to center at one time, and what clamps, bolts, nails, wire, or strap steel should be used. These things properly considered will repay the trouble taken and result in better and more economical work.

Various authorities place the cost of formwork at anything from 20 per cent. to 60 per cent. of the total cost. The possibility of reducing this hindrance to the more general use of concrete ought to be sufficient inducement for giving the matter close consideration. The great American constructional firms have struck out in many directions to reduce this cost to a minimum, and to this end the forms in most instances are designed in the drawing-office, and this at a cost of 2 per cent. and a saving of 10 per cent.

The author dealt with the kinds of timber used for formwork, the desirability of giving a camber to the bottom of boxes, carefully checking measurements to see that the concrete members are actually carried out as designed, the necessity of having joints close to prevent the mixture escaping, the remedying of cracks, the removal of forms, clamps and nails to hold the forms together, the repair and re-use of formwork, the number of sets required in order to get on fast enough with the work of building, the importance of carefully clearing forms of all sawdust, dirt, and chips before filling with concrete, the wetting of timber to prevent sticking, the use of sheet metal, the time for striking forms and methods of determining the strength. Details were given of forms designed for various parts of construction, as, for example, floors, beams, and pillars, culverts, conduits, tall chimneys, silos, tanks, gas-holder tanks, dams, domes, and bridges.

SPECIAL LEGAL REPORT.

Question of Building Line: Superintendent-Architect's Certificate: Judgment.

In Re the London Building Act, 1894: *Clode and Others v. London County Council.*

April 8. Court of Appeal. Before Lords Justices Vaughan Williams, Kennedy, and Swinfen Eady.

Judgment was delivered in this case, which was an appeal from a judgment of Justices Ridley and Lush, sitting in a King's Bench Divisional Court. (See our issue of February 25, p. 146.)

The appeal in the Divisional Court was against an order of the Tribunal of Appeal in the matter of the London Building Act, 1894, on the certificate of the Superintending-Architect, dated September 28, 1909, defining the general line of the buildings on the north side of Euston Road, between Hampstead Road and Osnaburgh Street. The appellants were Mr. William Leslie Brutton Clode, the Rev. Thomas Farmer Collins, and Mr. Martin Arthur Clode, trustees under the will of the late Mr. Lewis James Leslie, the respondents being the London County Council. The buildings referred to were Nos. 378, 380, 382, and 384, Euston Road.

In the Court below the judges differed, Mr. Justice Lush being of opinion that the

Tribunal of Appeal took an erroneous view when they held that they were bound by the authority of cited cases and that the order they made was wrong. In his opinion the appeal should be allowed.

Mr. Justice Ridley differed. In the opinion of the Tribunal of Appeal, he said, the proceedings of 1867 took place in connection with a proposal for fixing a new building line and were not intended to be, and were not a decision as to the general line of buildings.

In order that there should not be a division of opinion, Mr. Justice Lush withdrew his judgment and the appeal was dismissed with costs.

It was from this decision that the appeal took place.

Two of the reserved judgments in this case, those of Lord Justices Kennedy and Swinfen-Eady, were read allowing the appeal.

Their Lordships stated that Mr. Justice Lush had rightly decided the case, and the buildings in the forecourts were not unlawfully projected, and that therefore in 1909 the architect was bound to have regard to them in defining the general line of buildings, as the buildings had stood for sixty years without objection it might be taken that they were lawfully erected.

Lord Justice Kennedy added that Lord Justice Vaughan Williams (who was absent) had authorised him to say that he felt the case to be one of considerable importance and difficulty, but that he did not desire to differ from the opinions that Lord Justice Swinfen-Eady and himself had expressed.

The appeal was allowed unanimously, with costs.

COMPETITIONS.

Board of Trade Offices, Whitehall.

In the list of architects selected for the above competition (published in our issue of April 8) the impression was given that Messrs. Alec Horsnell and A. H. Brownrigg submitted separate designs. This, however, is not the case; we now learn that these two competitors acted in collaboration.

A Correction.

In our last week's issue we printed an official notice from the Royal Institute of British Architects, headed "The Mill Hill School Competition," warning members and licentiates not to take part therein. It has been brought to our knowledge that the heading was inaccurate and misleading, since it is not the Mill Hill School which is involved, but a school at Hale Grove Garden, Mill Hill, for which the Hendon Education Committee promoted a competition. We greatly regret any annoyance that may have been caused to the Mill Hill School authorities through our having published the Institute's notice as it reached us.

R.I.B.A. FINAL EXAMINATION QUESTIONS AND ANSWERS.

Owing to unforeseen difficulties we are unable to print the first article of the above series in this issue. We hope, however, to include it next week. The subject is, "The Properties and Uses of Building Materials."

PROJECTED NEW WORKS.

City Hall, Dundee.

Sir James Caird has given £100,000 to build a new City Hall for Dundee.

Housing, Hornsea.

Hornsea U.D.C. have decided to apply to the Local Government Board for sanction to a loan of £1,450 under the Housing of the Working Classes Act. It is proposed to erect eight cottages.

Hospital Extension, Leeds.

The project of building a children's block at the Beckett Street Hospital has been discussed by the Leeds Board of Guardians, who have decided to erect such a block at an estimated cost of £8,471.

Bathing Pool, Scarborough.

Scarborough Public Parks and Entertainments Committee have advised that the borough engineer be instructed to proceed with the formation of a bathing pool under the Belvedere Gardens. The pool will be oval in shape, 350 ft. long, 190 ft. wide, with outer walls of concrete. The cost is estimated at £5,000.

Street Improvements, Stockport.

A Local Government Board Enquiry has been held concerning the application of the Stockport Corporation for sanction to borrow £7,380 for the widening of Bramhall Lane; £1,087 for street improvements in Buckingham Road, Park Road, and Peel Moat Road, Heaton Moor: and £3,520 for the purpose of public walks and pleasure grounds at South Reddish.

Workmen's Dwellings, Chippenham.

A Local Government Board Enquiry has been held with respect to the application by Chipperton Town Council for sanction to borrow £2,460 for the purchase of land in Wood Lane and the erection thereon of working-class dwellings. The cost of each house would be £200, and to provide a hot-water bath would add £5 to the cost. There was no opposition to the application.

Church, Golder's Green.

Designs for a new church in the London Diocesan Home Mission district of St. Alban, Golder's Green, have been approved. The actual building is to cost between £8,000 and £8,500, with accommodation for 750 people. If necessary, an extra morning chapel can be provided at a cost of £1,000, while the campanile, about 100 ft. high, will cost about £1,500. It is also proposed to build a crypt.

Extensions, Burton Infirmary.

The General Committee of the Burton-on-Trent Infirmary have accepted tenders totalling £7,490 for extensions. The principal tender was for £6,150, and the scheme will include a new operating theatre, sterilising rooms, additional bedrooms for nurses and maids, an extension of the laundry, and the installation of new heating apparatus for the whole of the building.

Bridge Over the Severn.

Kidderminster Chamber of Commerce have reported upon an inquiry held by the Shropshire County Council relative to the erection of a bridge over the river Severn between Bewdley and Bridgnorth. They said they supported, on behalf of the Chamber, the view that the bridge should be at Highley and not at Hampton Loade. It was contemplated that a bridge would cost something like £11,000.

County Sanatorium, Essex.

The Public Health and Housing C
mittee have reported to the Essex Cou
Council that the Local Government Bo
had formally approved of the purchase
Sporehams Farm, Sandon, as a site for
erection of the County Sanatorium for
treatment of patients suffering from tu
culosis. Plans providing for the acc
modation of 110 patients had been
pared, and the committee recommen
that these be approved, and that the bu
ings be erected at an estimated cos
£17,395.

Hospital Extension, Kilmarnock.

At a meeting of Kilmarnock Infirm
directors a letter was read from the p
dent, Mr. George Clark which stated
he would give £7,000 to enable the
hospital extension to be carried out.
was also intimated on behalf of
Finnie, of Springhill, that she and
sister would give £5,000 for the same
pose. As a condition of these gifts
wards are to be named, one in memor
the late Mrs. George Clark, and on
memory of the Finnie family. The sch
will be completed as soon as possible.
will mean, it is estimated, a cost of
tween £30,000 and £35.000.

Houses, Shops, etc., Darlington.

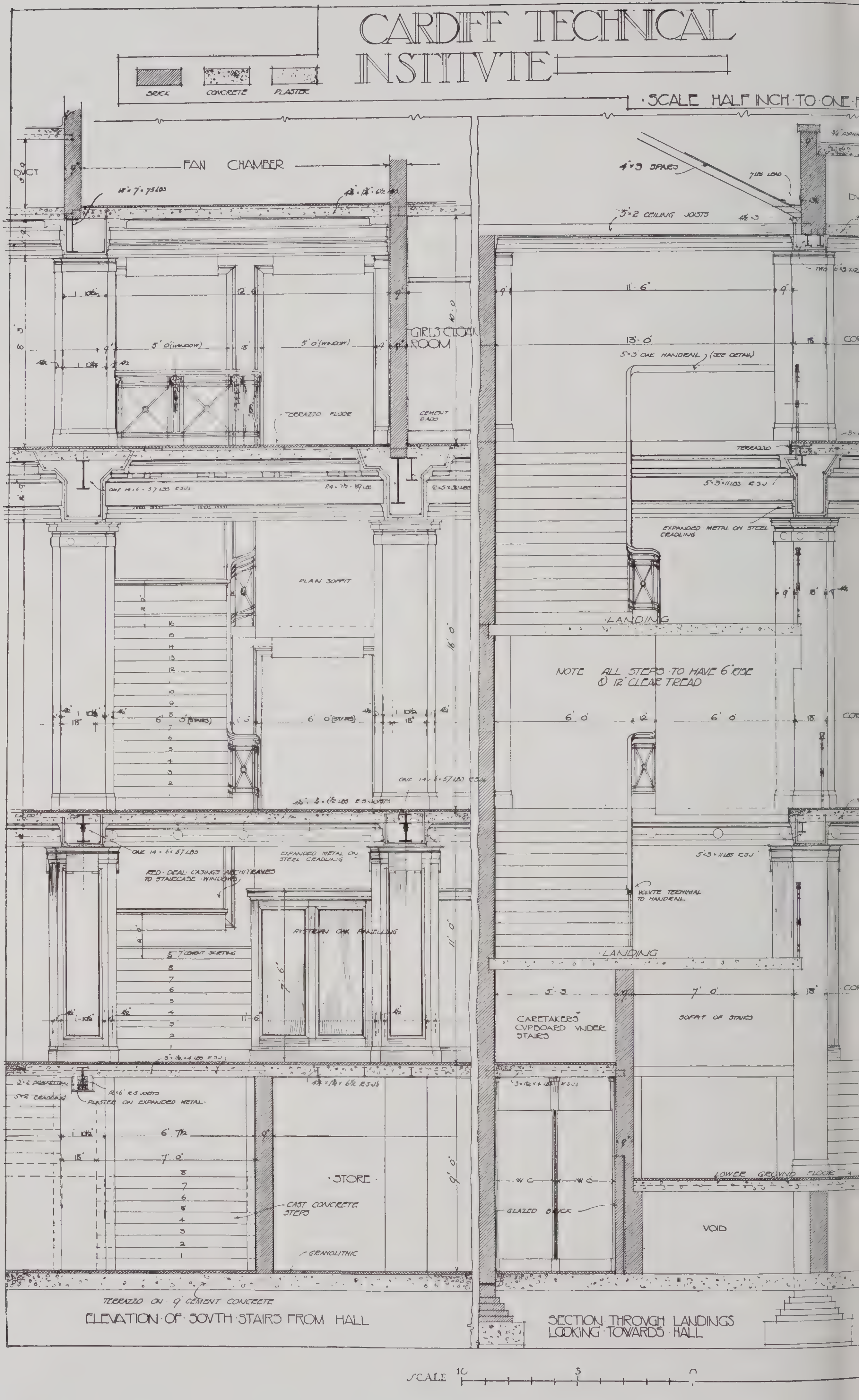
Darlington Town Council have appr
the following plans: Two houses, Ga
suburb; two houses, Cleveland Ave
house and shop, Hamsterley Street;
houses, Brinkburn Road; twent
houses, Olympic Street; two houses, I
Grove; house in Bracken Road; house
shop, Acacia Street; five houses, Orc
Road; house in Pierremont Drive;
tions to factory, Borough Road; alterat
and additions to part West Lodge; al
tions to premises, Gladstone Street;
houses, Brighton Road; twent
houses, Roslyn Street; new street
sewer, Haughton Grange Estate, Sal
Lane.

Sanatorium, Rochdale.

A Local Government Board inquiry
been held into an application by the R
dale Town Council for permission
borrow £12,500 for the purchase of
Springfield estate for the purposes
sanatorium "and other purposes as
corporation may determine." At the
quiry a letter was read which had been
warded to the Local Government Boar
the Rochdale Property Owners' Ass
tion, suggesting that the loan shoul
earmarked for the purposes of the s
torium only, as they did not consid
advisable to set apart a portion of the
for playing fields, a park, or for the
tion of working-class houses.

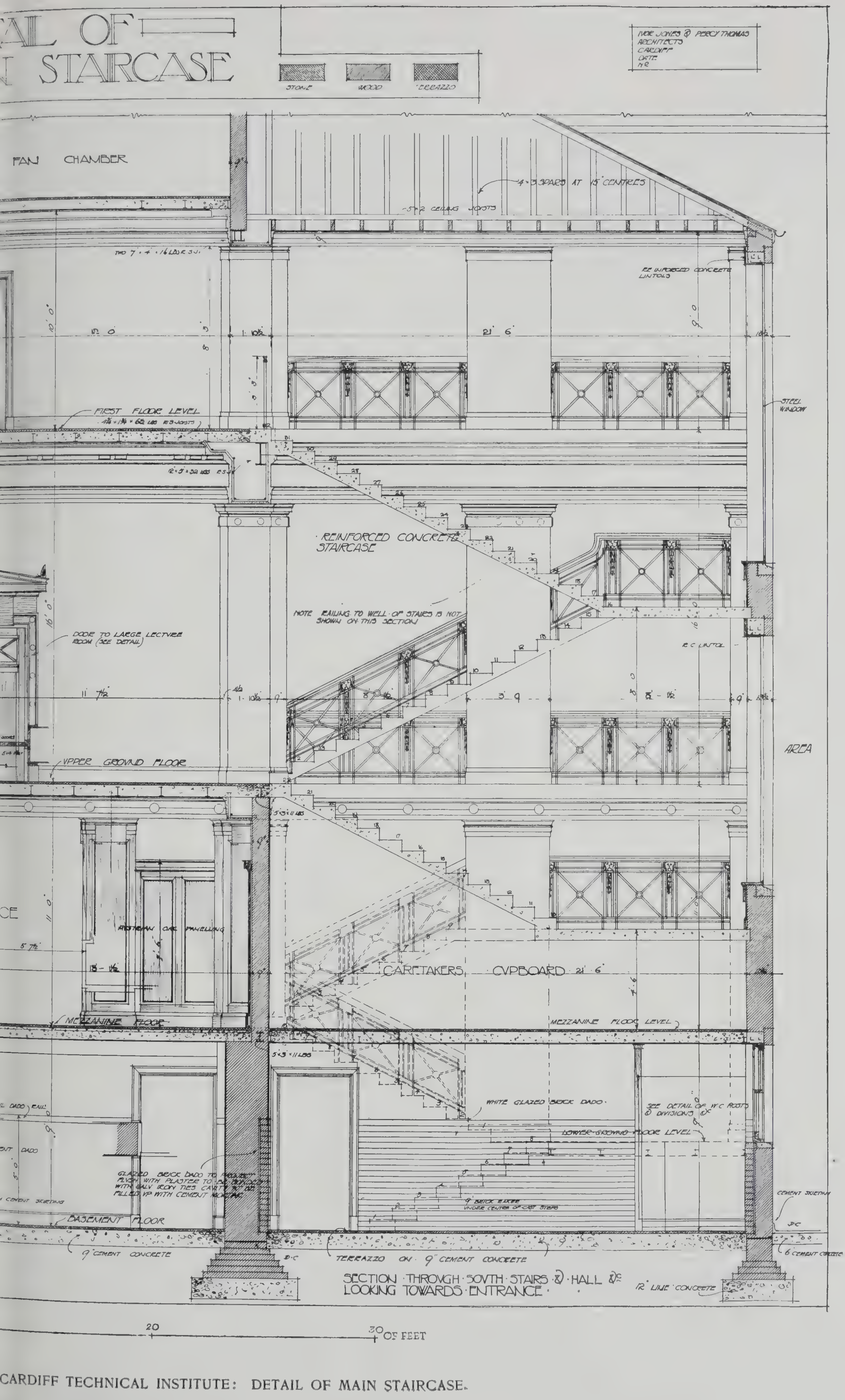
Dwellings, Gedling.

At a meeting of the Basford Rural
trict Council Mr. S. Maylan, the surv
and engineer, reported that he had
ceived a letter from Messrs. Wheeler
Watts stating that they had been instru
by Mr. H. Dennis Bayley to prepa
scheme for the erection of about
houses for the accommodation of mi
Mr. Wheeler asked whether the Cou
would lay down the main outfall se
which were necessary, or what course
had better adopt? Mr. Maylan consid
that the Council might well provide a
outfall sewer if the loan were sanctio
and if the owners gave a guarantee
such a number of houses would be ere
within, say, twelve months, as would b
sufficient rateable value to pay all cur
outgoings, plus interest and repaymen
loan, etc., on new sewers.


CARDIFF TECHNICAL INSTITVTE
BRICK
CONCRETE
PLASTER
·SCALE HALF INCH·TO·ONE·F
FAN CHAMBER
DVCT
GIRLS CLOAK ROOM
TERRAZZO FLOOR
CEMENT DADO
4"×3 SPARS
3"×2 CEILING JOISTS
11'·6"
13'·0"
5"×3" OAK HANDRAIL (SEE DETAIL)
5'·0"(WINDOW)
5'·0"(WINDOW)
ONE 14 × 6 × 57 LBS R.S.J.
EXPANDED METAL ON STEEL CRADLING
PLAN SOFFIT
LANDING
NOTE ALL STEPS TO HAVE 6" RISE & 12" CLEAR TREAD
6'·0"(STAIRS)
6'·0"(STAIRS)
6'·0"
6'·0"
16'·0"
RED·DEAL·CASINGS·ARCHITRAVES TO STAIRCASE·WINDOWS
AVSTRIAN OAK PANELLING
VOLVTE TERMINAL TO HANDRAIL
5"×3"×11 LBS R.S.J.
7" CEMENT SKIRTING
11'·0"
7'·6"
CARETAKERS' CVPBOARD VNDER STAIRS
SOFFIT OF STAIRS
5'·3"
7'·0"
PLASTER ON EXPANDED METAL
6' 7½
7'·0"
·STORE·
CAST CONCRETE STEPS
GRANOLITHIC
W.C.
W.C.
GLAZED BRICK
LOWER GROUND FLOOR
VOID
9'·0"
TERRAZZO ON 9" CEMENT CONCRETE
ELEVATION·OF·SOVTH·STAIRS FROM HALL
SECTION THROVGH LANDINGS LOOKING·TOWARDS·HALL
SCALE 10 5 0

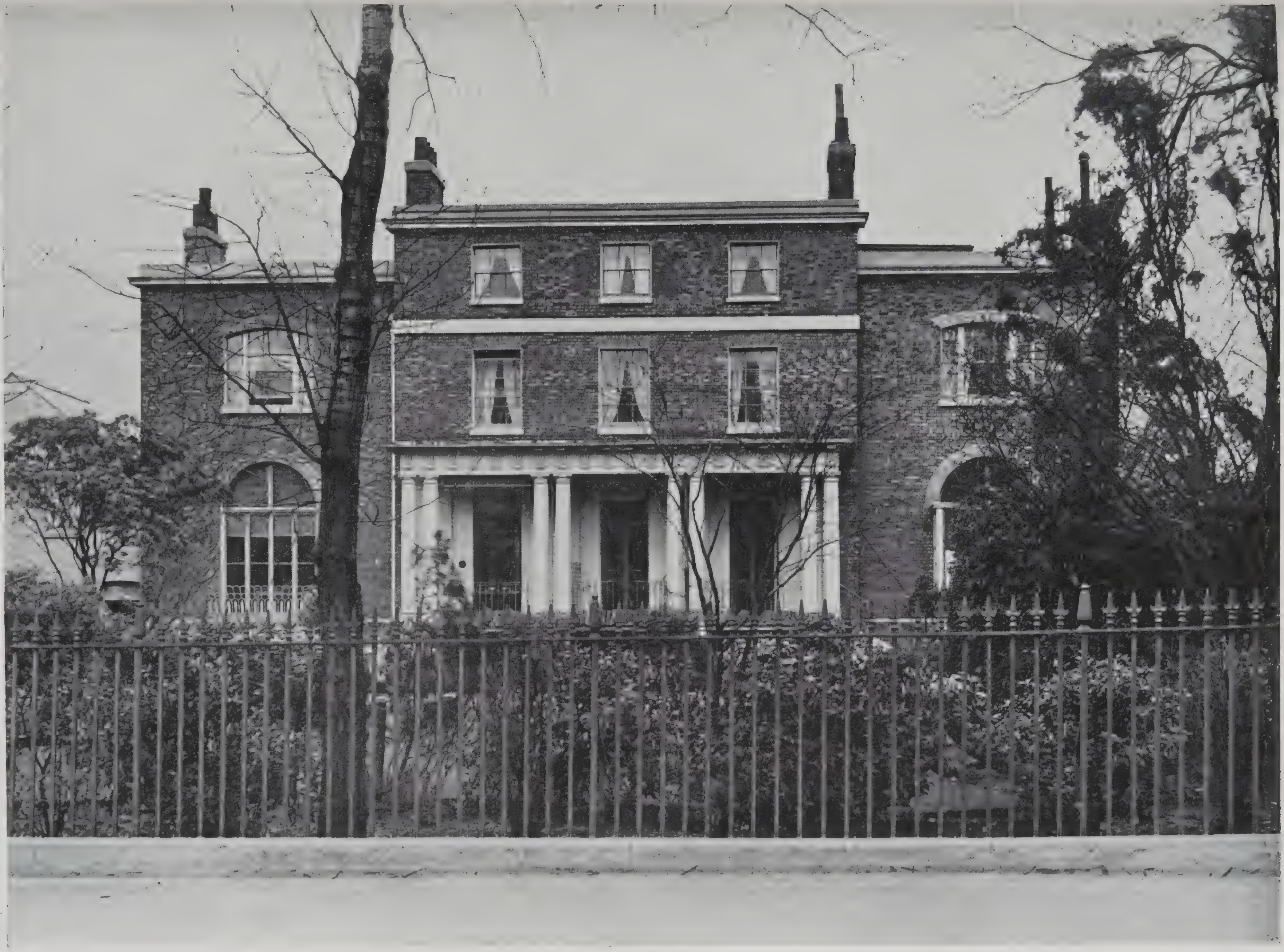
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW S

IVOR JONES AN


AL OF
STAIRCASE
STONE
WOOD
TERRAZZO
IVOR JONES & PERCY THOMAS
ARCHITECTS
CARDIFF
DATE
NO
FAN CHAMBER
4 × 3 SPARS AT 15" CENTRES
5 × 2 CEILING JOISTS
TWO 7 × 4 × 16 LBS R.S.J.
RE INFORCED CONCRETE LINTOLS
STEEL WINDOW
FIRST FLOOR LEVEL
12 × 5 × 32 LBS R.S.J.
REINFORCED CONCRETE STAIRCASE
NOTE RAILING TO WELL OF STAIRS IS NOT SHOWN ON THIS SECTION
DOOR TO LARGE LECTURE ROOM (SEE DETAIL)
R.C. LINTOL
AREA
UPPER GROUND FLOOR
5 × 3 × 11 LBS
AUSTRIAN OAK PANELLING
CARETAKERS CUPBOARD
MEZZANINE FLOOR
MEZZANINE FLOOR LEVEL
WHITE GLAZED BRICK DADO
SEE DETAIL OF W.C. POSTS & DIVISIONS &c
LOWER GROUND FLOOR LEVEL
GLAZED BRICK DADO TO PROJECT FLUSH WITH PLASTER TO BE BONDED WITH GALV IRON TIES CAVITY FILLED UP WITH CEMENT MORTAR
9" BRICK BARREL UNDER CENTER OF CAT STEPS
CEMENT SKIRTING
BASEMENT FLOOR
9" CEMENT CONCRETE
TERRAZZO ON 9" CEMENT CONCRETE
SECTION THROUGH SOUTH STAIRS & HALL &c LOOKING TOWARDS ENTRANCE
R. LINE CONCRETE
6" CEMENT CONCRETE
20
30 OF FEET

CARDIFF TECHNICAL INSTITUTE: DETAIL OF MAIN STAIRCASE.

MAS, ARCHITECTS.



SMALL HOUSES OF THE LATE GEORGIAN PERIOD. V.—DURLSTONE MANOR, CHAMPION HILL, LONDON, S.E.

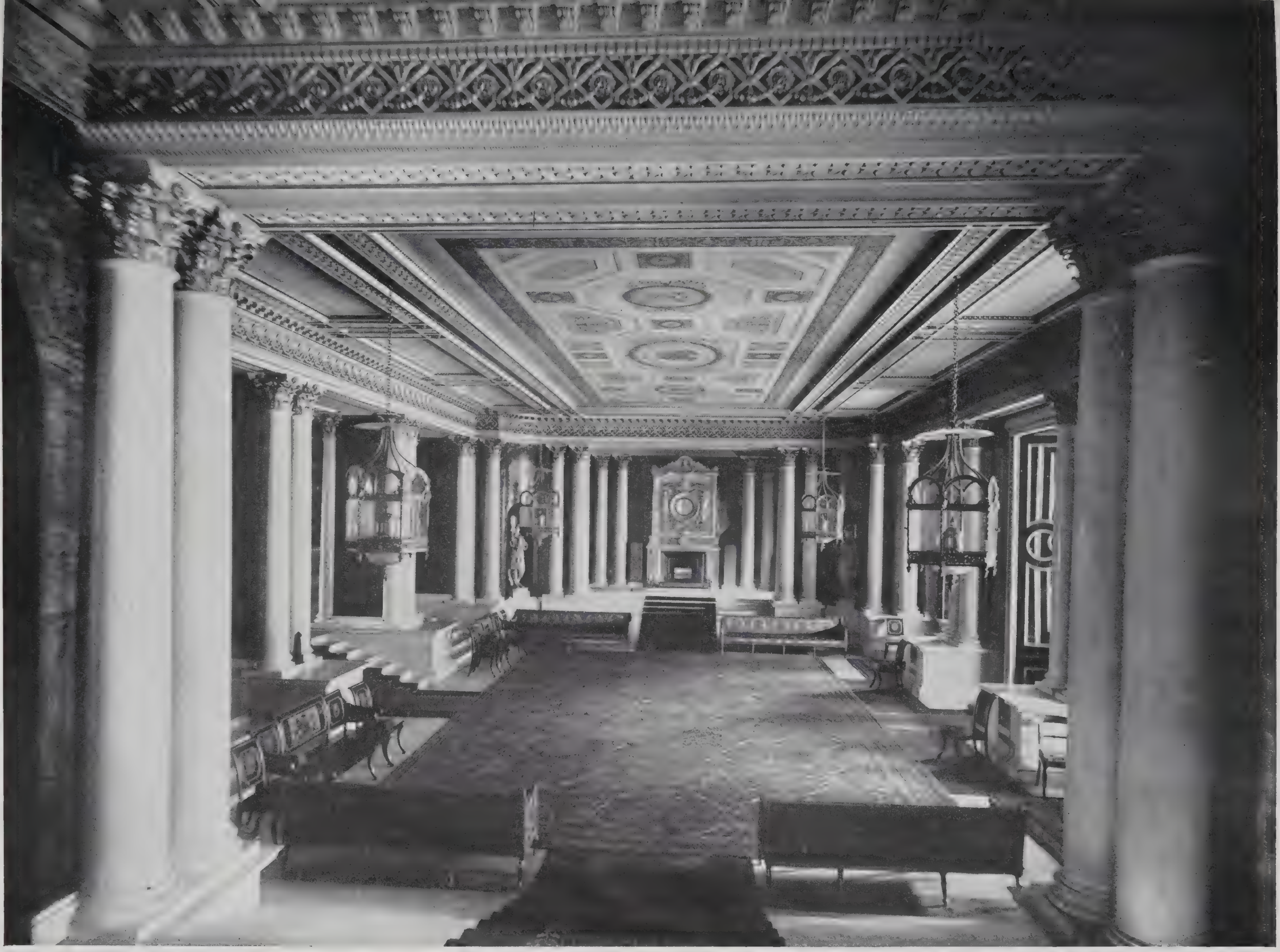
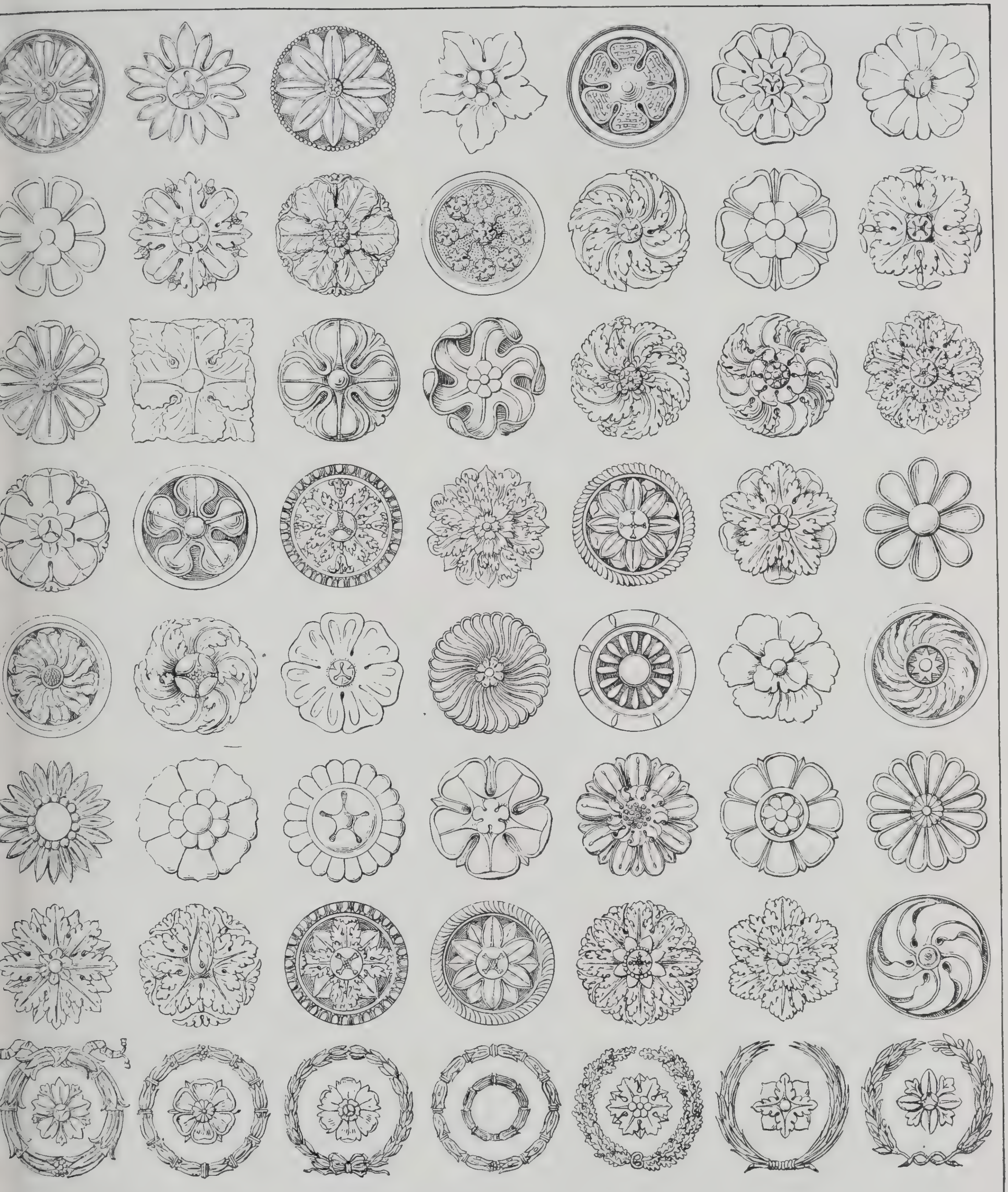
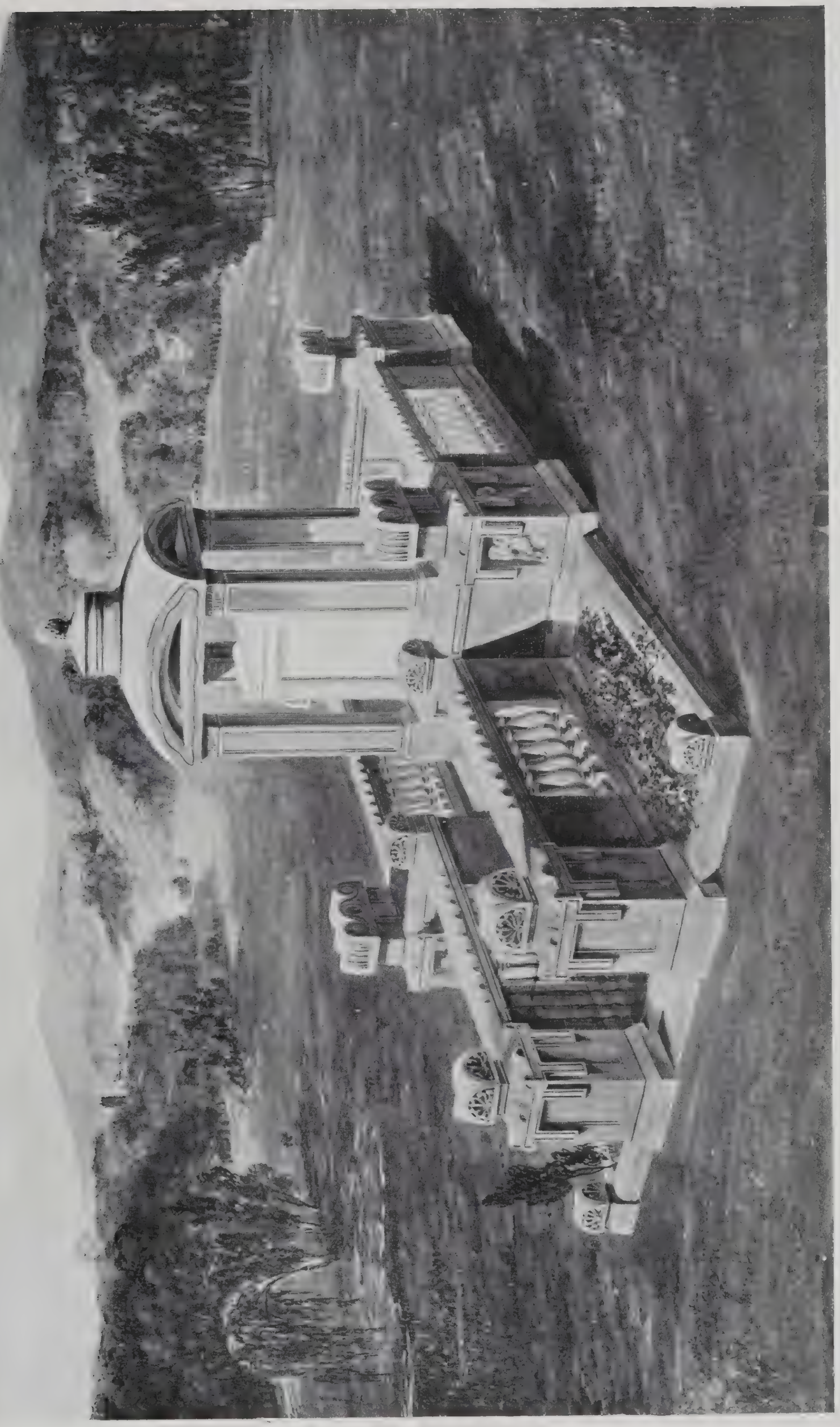


Photo: H. N. King.

PALACE INTERIORS. VII.—BUCKINGHAM PALACE: THE MARBLE HALL.



COTTINGHAM'S DESIGNS FOR IRONWORK. XI.—ROSETTES AND WREATHS.



MONUMENTAL ARCHITECTURE. XVIII.—DESIGN FOR A TOMB.

SIR JOHN SOANE, ARCHITECT.

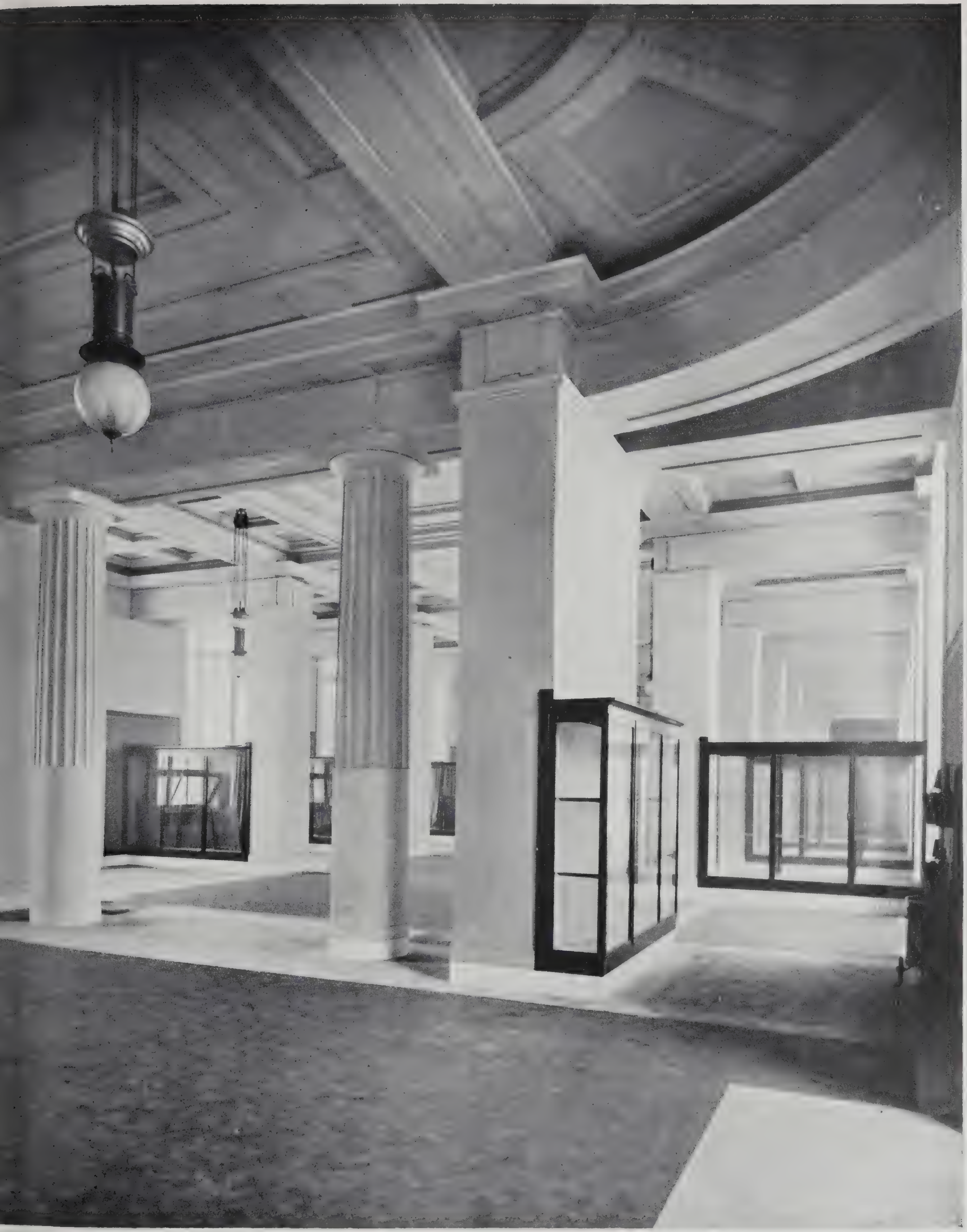


Photo: Record Press.

CURRENT ARCHITECTURE. LVI.—BRITISH MUSEUM EXTENSION, MONTAGUE PLACE, LONDON: VIEW IN FIRST-FLOOR GALLERY.

JOHN J. BURNET, LL.D., R.S.A., F.R.I.B.A., ARCHITECT.

&c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art = The Articles of the Town Planning Procedure Regulations (Preparation of Schemes by L.A s), 1914. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = A Local Authority's Scheme under the Act of 1909. Owner = Owner within the Meaning of the Lands Clauses Acts. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets.

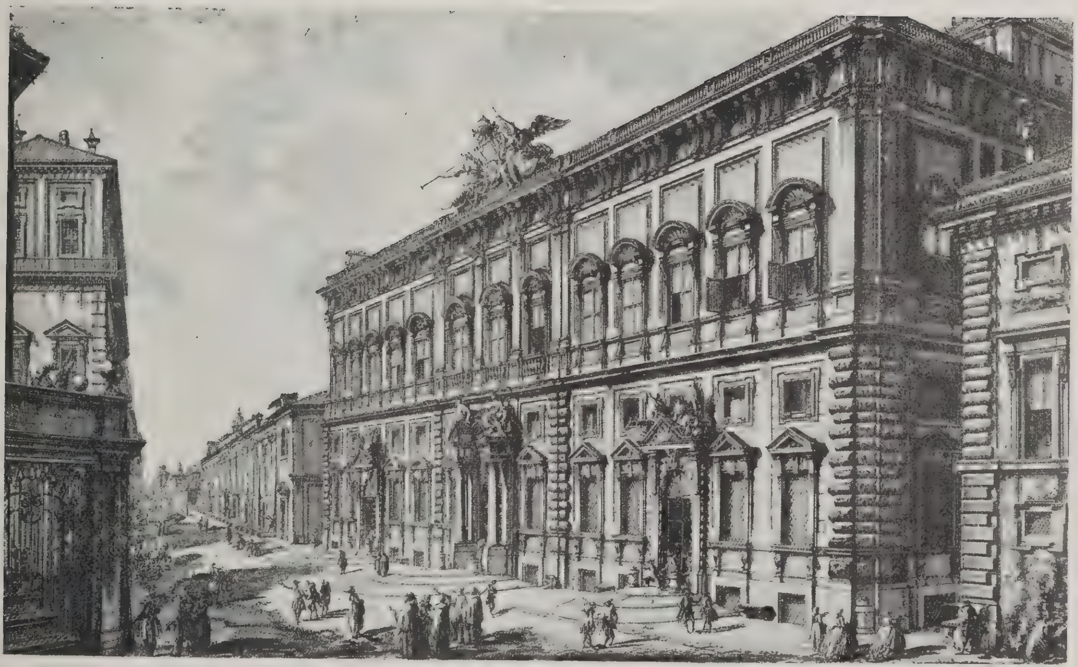
No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 2. Application to L.G.B. for authority to prepare a scheme.	Not less than FOUR WEEKS [Art. ii. (*a*)] after last of the notices served on Owners, etc., and publication of Advertisement under Art. ii. (*a*) see Stage 1, Col. 3 (*b*), (*c*), (*d*). Resolution to be passed by L.A. authorising application for Authority to prepare a scheme for area shown on Map No. 2 [Art. iv. (*a*) and *b*)] This Resolution is the Statutory Resolution required by Art. iv. (*a*), and must be transmitted to the L.G.B. without delay accompanied by the documents set out in Cols. 6A and 6B of this Stage [Art. iv. (*a*) and (*c*)] The date of this Resolution is the time from which the restrictions as to Compensation under Section 58 (2) Act of 1909 begin to operate unless L.G.B. fix otherwise. [Art. iv. (*a*) and Section 58 (2) Act of 1909]	Immediately after transmission of application to L.G.B. give notice of same, and date of Resolution by Advertisement in Local Paper. [Art. vii.]				(*a*) Copy of Map No. 1. [Art. ii. (*b*) v. (*a*) and xxiii] (*b*) Copy of Map No. 2 certified by Clerk to or other Officer of L.A. [Art. iv. (*b*) and v. (*b*)] N.B.—Map No. 1 as deposited in Stage 1, Col. 5, may, with proper additions [Art. iv. (*b*)] be used for Map No. 2, under conditions set out in Art. iv. (*d*). [Art. iv. (*d*)] (*c*) Statements giving particulars of Scheme required by Art. v. (*d*) to (*k*). [Art. v. (*d*) to (*k*)] (*d*) Estimate of Cost of Scheme. [Art. vi. (*a*)]	(*a*) Certified copy of Resolution. [Art. iv. (*c*)] (*b*) Statement as to Membership, Attendance, and Voting upon Resolution of L.A. [Art. iv. (*c*)] (*c*) Certificate by Clerk, or other person competent to certify, containing information required by Art. xxiii. and exhibits in proof of compliance with the requirements of Arts. ii. and iii. [Arts. v. (*a*) and xxiii.] The exhibits required are (1) Copy of each form of notice served under Arts. ii. and iii. (see Stage 1, Col. 3 (*b*), (*c*), and Col. 4A. (*b*)); (2) Copy of Map No. 1 (see Stage 2, Col. 6A (*a*)); (3) Copy of paper containing advertisement (see Stage 1, Col. 3 (*d*)). [Art. xxiii.] (*d*) Copy of all written objections not withdrawn or removed. [Art. v. (*c*)] (*e*) Statement as to acreage, population, debt, etc., of L.A. [Art. vi. (*b*)] (*f*) Statement as to acreage, population, debt, etc., by any other L.A. bearing part of cost of scheme. [Art vi. (*c*)] (*g*) Copy paper containing Advertisement of Transmission of Application to L.G.B. (see Stage 2, Col. 3). [Art. vii.]	(*a*) L.G.B. give Notice of Public Enquiry (if any), such notices to be posted by L.A. as L.G.B. may direct. (*b*) Probable Public Enquiry by L.G.B. [see L.G.B.'s Circular letter of 3rd May, 1910], to enable them to decide upon the necessity for, and the Area to be included in the Scheme. [Sect. 54 (2), and 63 Act of 1909] (*c*) L.G.B. give Authority or otherwise to preparation of a scheme with or without modifications. [Art. viii. (*a*)]

CHART OF TOWN PLANNING PROCEDURE FOR LOCAL AUTHORITIES' SCHEMES—STAGE 2.

THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, April 29, 1914. Volume XXXIX. No. 1008.

No. 82.



(From Piranesi.)

THE ARCHITECTS' & BUILDERS' JOURNAL.

APRIL 29, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1008.

Architectural Recruiting.

NEARLY all the disputes over educational matters which have raged and are still raging in the architectural world may be said to have as their subject the merits and defects of the examination system. There are people who deny the value of academic training and who maintain that a degree in architecture is of little worth. They quote the names of the numerous self-educated architects who have nevertheless succeeded in distinguishing themselves. It has yet to be proved, however, that an academic training would have injured these men had they received it. On the contrary, if we were to study the history of their mental development we should probably find that so far from following every wayward path which pleased them, so far from flourishing under conditions removed from restraint, they had in reality submitted themselves to a discipline which only differed from that insisted upon at the schools in that it was self-imposed and even more severe. If any special type of examination is deemed to be useless the obvious remedy is not to abolish examinations altogether, but to change their character. In the opinion of most people this particular battle has already been fought and won, and the average architect is now convinced that it is desirable for students to undergo some kind of test before they can be considered worthy of the status and privileges which full membership of our profession should confer. But there is another question which has not yet received adequate consideration. Assuming that it were fully established that architects should submit themselves to some course of academic training in the rudiments of their art at a University, atelier, or school, with the intention of becoming candidates for a degree, and making also the very much larger assumption that this final examination were a real test of ability, all would not yet be well, and the task of our educationists would be only half completed. It is not sufficient to have an admirable system of instruction for the benefit of those who have already decided to become architects; we must do our utmost to attract into our profession the most brilliant talents which can be found.

Let it not be taken for granted, as it too often is, that a boy ought to become an architect merely because he has an aptitude for drawing. Everybody familiar with the standard of values which obtain in the ordinary school, and especially in the great Public Schools of England, must be aware of a certain mischievous practice of arranging the subjects forming the educational curriculum in a sort of hierarchy. The Classics, of course, occupy the first place, but mathematical studies are also held in high esteem, and, although differing in kind from the former, are yet regarded as being of co-equal rank. Those who are not capable of grappling with the intricacies of Latin and Greek, but who are yet endowed with a certain amount of linguistic ability, seek to become specialists in French or German, or even in the literature of their native tongue. On the other hand, it is assumed that mathematicians of the second rank who can never hope to attain eminence in the field of exact science should take to chem
physics or engineering, and in the more hopeless
to botany or medicine. But what of the rest?
of the boys who are quite destitute both of literar
of scientific gifts, who have neither humane cultur
yet the faculty of hard logic? They draw. "E
do something with your hands," says the caustic sc
master. Those possessed of sufficient industry to
how to copy animate and inanimate nature be
painters. There are others, however, who can n
depict the human figure nor yet landscape; they c
even draw pots and pans, and so qualify to be ma
of "Still Life"; they can only be trusted to gu
ruling-pen against a ruler.

Architects must not permit it to be assumed
from this residue of a residue their recruits are
drawn. They must insist rather that architectur
supremely difficult art, and that the highest talen
not wasted in its service. But when one visits a s
or University one seldom finds that the most br
youths have architectural ambitions, or, indeed
disposed to devote themselves to art of any
Whose fault is it? When things go wrong it is
rally somebody's fault, but it is not often easy
the blame upon the right persons. This is one
few occasions, however, when the blame can be
rately and justly apportioned. It rests entirely
that numerous and loquacious body of artists,
philosophasters who have continually preache
pernicious doctrine that art does not make its app
the intellect, but to instinct, feeling, and em
Democracy has brought not only great blessing
great evils, in its train, and one of the worst evils
can be attributed to it is this emotional theory
Those who tread the path of intellect are oblig
recognise that there is an order of merit. In
establishes degrees of rank—not spurious degre
those of wealth, but a real rank such as appe
to a true aristocracy. But if art be nothing but a
of feeling and taste—and this doctrine is often af
by fluent and popular writers—then criticism is u
for criticism must imply an intellectual standard
not to degenerate into the expression of person
capricious fancy. The world of art is apt to
vaded by impostors, and imposture can on
exposed by means of reason. That is why so
of our so-called artists hate the very name of r
if anyone ventures to dispute their claims to emi
he is informed that æsthetic tastes differ, an
sacrilege to seek to analyse a work of art. So
bereft of all means of judging whether one opi
of more value than another. Democracy may
necessity of good government, for it has been
that every privileged caste tends to rule in it
interest; but it does not follow therefrom that b
all votes should have equal value. all opinion
should be considered equal. It is because the em
philosophers seek to establish democracy
spiritual world as well as in the political tha
influence is so mischievous. When there is
sensus of opinion that art and intellect are

ble terms, nearly all the cleverest boys are ouraged from entering the field of art at all; and n they see that artists are largely recruited from ranks of draughtsmen well known to them as olfellows who have failed to distinguish themselves itellectual studies, then their indifference to art is further increased. How often, in a public school, ie drawing class considered an immense joke, an eable interlude during which everybody gives his ns a rest! The drawing-master is generally ted with a politely masked disregard!

rchitecture must be approached from the point of of design and not from that of draughtsmanship, design itself must become an academic subject inated by rules which are capable of rational osition, before we can expect the brighter spirits ur schools to be interested in it. For while a py emotionalism leaves them cold the glitter of lect would attract them immediately.

A. T. E.

The House of Commons.

IE suggestion that a new House of Commons, of circular design, should be built appears to have aroused more than a mere tremor of interest ng members of that assembly. Last week, for nple, Sir William Bull declared to a "Standard" viewer his unbending opposition to any interfer- with Sir Charles Barry's plan, intimating that Sir icis Fox's scheme was opposed to Anglo-Saxon ls and party principles, and would upset the essiveness of the opening of Parliament by the . It is quite clear from this that Sir W. Bull's ideals rise above paltry matters of sanitation or of sitting accommodation; but we suspect he d not carry with him the present materially minded se. A symposium of members on this topic would interesting experiment. We should get, at any an indication of whether or no hon. members' tectural sympathies run on strictly party lines: her the Front Bench would unanimously wait and hat Mr. Asquith thought about it, and the Leader e Opposition give the architectural line to his wing, or whether each member would think for elf. In either case the result could hardly fail to verting. It might be enlightening.

A Suggestion for the R.A.

E coming of the Royal Academy Summer Exhibition reminds us of the melancholy fact that Architecture at Burlington House continues to y the position, in the eyes of the general public, poor and despised relation of Painting. In this ction we note that Mr. P. A. Robson, writing in irrent issue of the Journal of the Royal Institute itish Architects, revives an interesting suggestion he put forward several years ago, to the effect he Academy should open the galleries that are use during the Winter Exhibition for a repre- ive show of architectural models, photographs, ng drawings, and sculpture. The idea is excel- and if acted upon, would remove two very serious aches from the Academy's administration. It is obvious that the serried lines of perspectives to we are accustomed at the Summer Exhibition are less to interest or instruct the average person. qually evident that though British sculpture has on a new vitality during the past two decades, no s attempt has been made to provide additional modation for this section. Sculptural exhibits, rue, are now allowed in some of the galleries d to pictures; but the only effect of this conces- as been to increase the risk of their being injured, diminishing the chance of their being seen. ecture has not gained even this doubtful ge. Surely the time has come when the Academy architects and sculptors might for their common benefit combine in bringing pressure to bear on their unprogressive fellow-members.

The New York Court House.

IN our issue of March 25th we published a double plate showing the Perspectives of six leading designs in the New York Court House Competition, including the fine scheme for a circular building by Mr. Guy Lowell, which was placed first by the assessors. Our note on this design, however, stated that it was not to be carried out, and we were fully under the impression that this very regrettable decision on the part of the Supreme Court Justices was final. It appears, happily, that this was not the case. A New York newspaper states that the Justices have formally withdrawn their objections to the plan of a circular Court House, and we have received from Mr. Lowell himself a letter confirming this news. Pending some modifications in one of the plans, the final decision has not yet been given; but there can be little doubt that this will be favourable. The increase in the cost of the steel and stone work, due to the form of the building, will, in the opinion of experts, be purely nominal, and the expert report on the ventilation and lighting disposes of yet another of the objections raised. We congratulate Mr. Lowell and New York City on this turn of events. The design appears to us to be most admirably adapted to the triangular site contemplated; and even if that site be modified, as it is suggested it may be, the building cannot fail to prove a dignified and impressive monument.

The Architect and the Cottage.

THE writer of an entertaining article in "The Outlook," dealing with the wide-spread enormity of the red-brick—of the wrong shade of red—villa in the English country-side, relates that the builder of over a hundred red villas once confessed to him that only on one occasion had he ever employed an architect, and that from the designs and plans that were then prepared for him he had been building ever since. This touches an old but a very real grievance of the architect; one, too, that is worth recalling at the present time when housing schemes are very much in the air, and people are disposed to censure the architect for an alleged indifference to them. How often one hears that no architect is anxious to design a small cottage because there is "no money in it"! So he acquires the reputation of an avaricious and unsocial person, who will only undertake work when the commission means a good round sum in his pocket. A little reflection will show that what he really objects to is not the smallness of the commission for designing a cottage nor even the designing of several cottages for the price of one, but the uncontrolled stereotyping of his design. His own plan and specification may, moreover, be so distorted by modifications during the process of repetition that its intrinsic value is lost to the community. Better by far that the speculative builder should do without him, and be left to work out his own damnation.

Preservation of Ancient Monuments in France.

AN interesting proposition, by M. Georges Leygues, for the more comprehensive preservation of ancient monuments, has been adopted by the French Chamber of Deputies. The law already provides for the protection of monuments of which the architecture or the decoration is deemed worthy of preservation; but it has been realised that these conditions are not sufficiently comprehensive, as they exclude a large number of buildings which, while without distinctive artistic merit, should nevertheless be cherished for the sake of the memories they evoke, or for the traditions they represent. It is proposed, therefore, to create, as a sort of addendum to the Ministry of Public Instruction and the Beaux-Arts, an office which shall be charged with the repair and conservation of monuments not scheduled under the existing laws. This rather oddly constituted authority will have power to insist on the due maintenance of such monuments, and, in case of refusal on the part of the owners, may itself undertake the necessary work, the expenditure incurred being met out of funds derived from voluntary contributions or legacies, or from any grants made by Government or by local authorities. Such an institution marks two rather noteworthy differences between the French and the English outlook. In the first place, the official sanction which in France seems to stimulate voluntary effort would in England merely stifle it; and, secondly, it will have been observed that whereas the first care of the French was for works of art, ours has been always for historical association or archæological interest—terms, however, that have the advantage of being more comprehensive in their application.

Unwholesome Houses.

SIR THOMAS OLIVER, Professor of Medicine at Durham University, cited, in a recent address, some rather startling instances of the persistency of cancer in certain houses. Drawn from various countries, and showing, apparently, a complete independence of the influence of heredity, these cases seem to indicate either the highly infectious character of the disease or some special proclivity for engendering or propagating it. As to the infectiousness, this is merely a question of degree; and the other contingency is related to it in so far as the conditions are more or less favourable to the culture of the germs. Site, soil, aspect, planning may, in exceptional instances, all combine to render a house desperately unhealthy; and even where all these conditions are favourable to health, they may be all utterly neutralised by the ill habits of the inmates. Occasionally it is only a particular room in a house which acquires a malignant reputation, which may or may not have for its root cause the situation of the room. Dr. D'Arcy Power quotes a case in which three women who occupied in succession a particular bedroom contracted the disease; and it is remarkable that one of these victims had lived in the house for twenty years, and another for eight years, healthily enough, before coming under the malign influence of this lethal chamber. It is curious to read that no further case occurred after the room had been thoroughly disinfected! This appears to have been, therefore, an instance of purely superficial infection; but unfortunately it is not difficult to imagine cases in which the causes are more radical and fundamental. Dampness and the exclusion of air and sunshine may, by lowering vitality, predispose to any and every disease, and such conditions should nowhere be tolerated. The whole subject of unwholesome houses needs revision in the light of modern knowledge of hygienics.

The Lumber King.

AMERICA being a Republic, kings are as plentiful there as colonels. Now, alas, there is one king the fewer by the death, at Pasadena, California, of Mr. Frederick Weyerhaeuser, who was known as the Lumber King. He was born to reign. When a young German immigrant, he got a job at a sawmill in Illinois, and "within six months he was managing that mill." Realising that in course of time the vast timber forests of America must dwindle, he bought them up continuously and heroically, until his holdings were estimated at fifty thousand square miles, and his wealth something under a hundred millions sterling! Possibly
the figures are a trifle exaggerated, but Mr. W
haeuser's proud title is unaffected by their round
To him America doubtless owes much for the dev
ment of her timber industry; but, as a serious s
one has to remember that this calculating king
have hastened greatly the shortage he foresaw,
may be supposed that it was his sole business t
down trees, not to plant them; the latter unprofi
business being left to the Government. Mentic
America's timber production recalls an interesting
a rather significant fact in its history. After 180
difficult relations with the Baltic Powers suggested
preferential treatment should be extended to Ame
the duties on Canadian timber were almost ent
repealed, while those imposed on Baltic timber
doubled!

THE PLATES.

WE publish this week the first of a new seri
Plates of Vases employed as decor
adjuncts to architecture. These are not
fine in themselves as works of the modeller's art
are also worthy of study by reason of the many
gestions for architectural ornament which
embody. Our series of Late Georgian houses is
tinued in this number; current architecture is r
sented by a notable building by Messrs. Niven
Wigglesworth; and our other series—Students' D
ings, Working Drawings, Designs for Ironwork-
we think, worthily maintained. We append not
the more important of the Plates.

Warehouse, 4, *New Burlington Street, W.*
and Wigglesworth, Architects. This building
recently been erected for Messrs. John G. Hardy,
by Messrs. Dove Bros., and is of fire-proof constru
throughout. The front is of Portland stone.

Marble Vase on Pont Alexandre III.,
Gardet, Sculptor. One of the most famous of m
Paris bridges, the Pont Alexandre was built durin
last four years of the nineteenth century to comm
rate the Franco-Russian Alliance. The archite
is particularly rich in sculptural ornament by Fr
Dalou, and others. M. Gardet, the sculptor of
vase, was also responsible for the group of lion
children on the north side.

Houses of the Late Georgian Period.—(1) *Ho*
Herne Hill, S.E. This house is an inter
example of the fusion of traditional Palladian
characteristic of the early part of the eighteent
tury and the Greek work typical of the latter p
the century. The composition, with the proj
lower storey treated in the manner of a pa
enclosed arcade with the low wings on either
(which it is impossible to show to their full extent
photograph) is a well-balanced piece of design, a
detail throughout has been most carefully consi
(2) *Houses in Water Lane, Brixton, S.E.* The
good examples of early nineteenth-century hou
the simpler type. They are finished in smooth
plaster, and have flat pitched roofs, with wide
hanging eaves, covered with grey slates; the ar
ment of glazing bars is interesting and typical
period. The slight proportions of the porches
ently emphasise the entrances without being
obtrusive—a fault which is very noticeable in m
the later work where Doric porches, heavy and
scale with the rest of the design, are frequently u

Our remaining Plates consist of *Greek and*
Ornaments designed by Cottingham for Ironwo
excellent Student's Drawing of the *Fontana di*
Rome, by Mr. E. F. Lewis, of the Massachusetts
tute of Technology, and a working drawi
Gilmour Hall, Liverpool, by Professor C. H.
We also give the third stage of our *Practical C*
Town Planning Procedure.

HERE AND THERE.

OW that "The Times" is a penny newspaper, and certified circulation figures are being flourished boldly in the face of the public, it is e than ever evident that the modern spirit of enter- e is going to disturb a good many reputations, and ems likely that the newer factor in daily journalism find a corresponding expression in the realm of nical periodicals. Some such energy has always acterised those who have been responsible for the duct of this Journal. From the first it has been er a disturber of the peace. Prior to its appear- on the scene, the architectural and building klies were in a sort of comatose condition, enjoying epy serenity which was quite in accordance with days when there was no hurry to publish news, and n the wood block required a week or more for its luction. From this state of somnolence some, ed, have scarcely recovered. In surveying the ation one cannot but feel that the newer spirit has ght with it many wholesome changes. It is a orous spirit for all that is most up-to-date. utations which rest on the activities of yesterday t, if they are to prevail with any force to-day, be to substantiate their position by facts and figures. ry journal, no doubt, has a good opinion of own achievements, but it must produce current ence in support of them. In this connection it may teresting to raise a point on the repeated assertion e "Building News" that it is "the leading journal he profession," and rejoices in "the largest sale any professional journal published." It is in ect of just such assertions as these that the newer it of journalism makes itself manifest. It ands proofs, the only satisfying evidence being afforded by the actual sale figures. Architectural nalism is not a pleasant hobby for a few anthropists to engage in, but a serious business lving a considerable amount of capital and much and thought on the part of the editorial and inistrative staffs. Hence, one has every reason to exception to any serious statement, circulated dcast, unless it is supported by specific evidence. ould be interesting to have set out, attested by table accountants, the actual sale figures of this nal and those of the "Building News." In a ting spirit I should be willing to wager that this nal has by far the larger circulation and is much nore widely read.

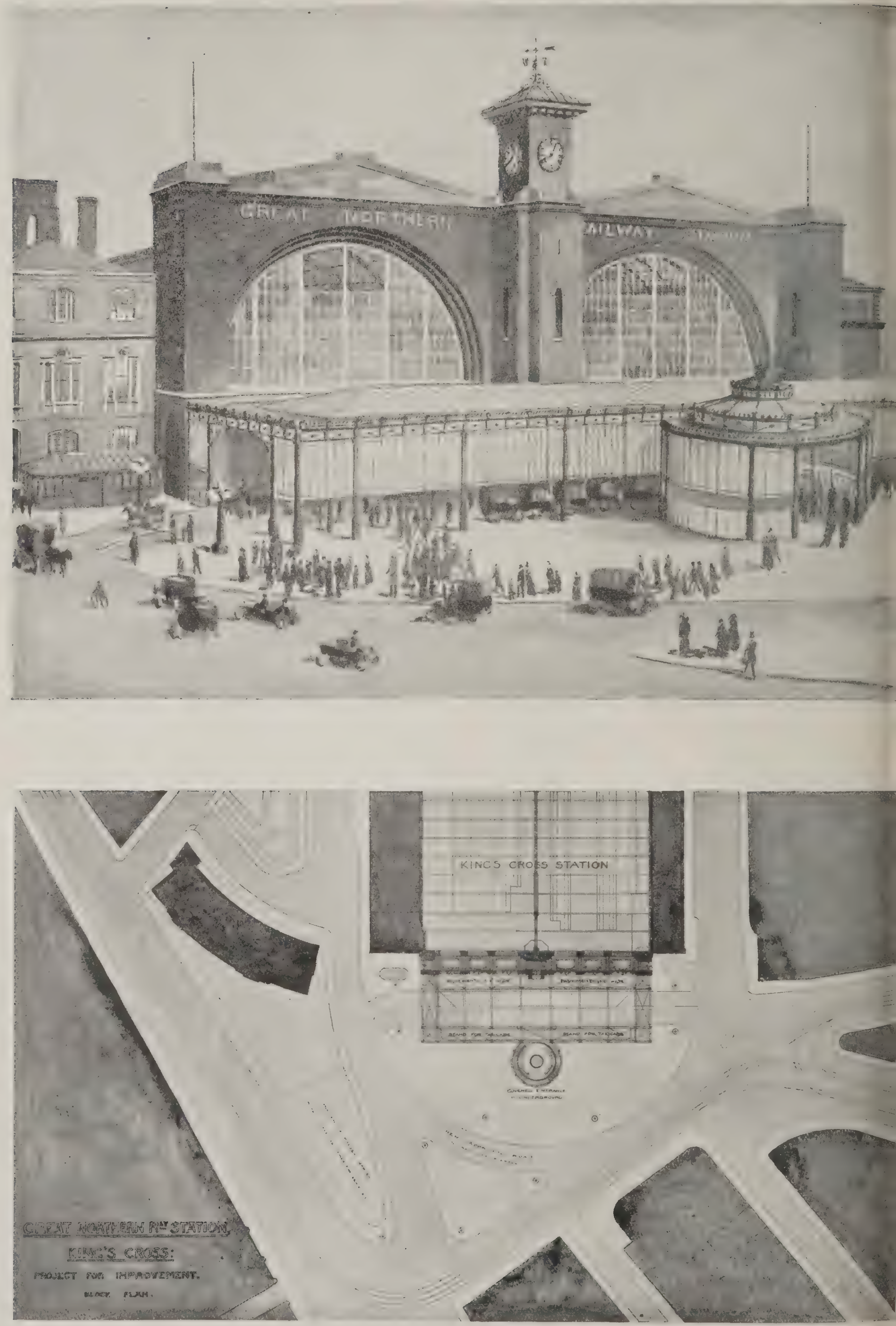
* * * *

vels seem to be quite the order of the day in artistic ries; so it was in keeping with the fashion that Junior Art Workers' Guild should have had a revel week in the old hall of Clifford's Inn, which, by the , is about to be demolished—a rather interesting building with some sturdy panelling inside, and ter enrichments of that dull Gothic kind which ace Walpole was so mightily pleased with at wberry Hill, and Hawksmoor used with such sad t in the second court of All Souls' College, Oxford. revel proved uproariously jolly, the assembled y of younger men belonging to the architectural ession and the various handicrafts giving ample ence that the artistic temperament can, on occa- , be conspicuously hilarious. There was, indeed, e a roistering spirit abroad, more especially when ables began to be cleared. It was surely nothing the intervention of Providence which enabled me, mble guest, to remain unscathed in a place that rendered fearsome by reason of the number of ed potatoes which members hurled about with the ost artistic abandon. Even so the Danish warriors about the bones of the feast. But, remembering this was an occasion consecrated to fun and youth, I went through the evening, as Pepys would say, "with much content, and so home," after we had had a morality tragedy concerning Minos and Knossos, "A Crime in the Con-Cretan Manner." As a mild diversion, in connection with a raffle for Mr. Tony Sarg's cartoon of the play, we had the editor of a well-known architectural journal modestly standing up a good height when the call came for the most guileless and child-like person in the room to draw the lucky number from the hat!

* * * *

The revel alluded to above provided me, incidentally, with a table companion who was interesting as being an architect out of fashion—that is to say, one whose sympathies were strongly towards Gothic. At a time when the Classic man meets us at every turn, it was quite refreshing to hear Bodley being praised instead of Cockerell; and to listen to an estimate of the achievements of leading men to-day from the point of view of an architect who was not stirred by the glories of the so-called Neo-Grec, and remained unmoved in the face of all manner of attempts to revive interest in Kent and Chambers and the rest of the eighteenth-century men. In course of conversation I chanced to express my admiration of the Wesleyan Hall, which, to my mind, is a great modern building, but the eulogy found no echo, that ill-digested medley of Gothic elements, the new Middlesex Guildhall, finding far greater favour in my companion's eyes. But it was church work that gave him material for most appreciation. Who among contemporary architects had achieved greatest distinction in that field of design? Well, we were both agreed that Mr. Walter Tapper should be accorded a high place for the fine qualities his work displays. Then there is Mr. Temple Moore, who assuredly has done some beautiful work. Such a church as All Saints', Tooting Graveney, is a notable achievement at a time when the Gothic fervour has passed away. There is, too, Mr. Spooner to take account of. His work certainly appeals to me. It is not the stock kind of Gothic stuff that the ordinary church architect produces, the sort of work which commences with those deplorable views of new churches which appear in obscure provincial newspapers and ends with a flourish at the Architectural Room, where the original iniquities, still perpetrated, are softened off and wrapped in the glory which the clever perspective artist is ready to provide. There is a wealth of grace about Mr. Spooner's churches, and one recognises also the hand of a craftsman who is not content to do things according to rote. (There is, for instance, a vast difference in the tracery of a window which has been turned out by some witless builder from a slap-dash half-inch detail, and tracery fashioned in accordance with the architect's carefully-drawn full sizes, and carried out sympathetically under the guidance of the designer.) Among church architects of to-day one has also to take account of Mr. Bidlake. He has not, I believe, done a great deal of church work, but such a magnificent tower as St. Agatha's, Birmingham, at once proclaims his ability. What, too, may we say of Mr. Gilbert Scott and his great cathedral at Liverpool? Surely a mighty achievement, one which as it slowly becomes translated into actuality, must convince the most ardent Classicist that there is a deal of worth possible even to modern Gothic. Mr. Comper is another church architect of note, though he shuns publicity, and as a consequence the profession knows very little about him. These are all names of men whose churches merit high praise. The list, I fear, cannot be extended very far, but, such as it is, it shows us that the talented Goth is not entirely extinct.

UBIQUE.

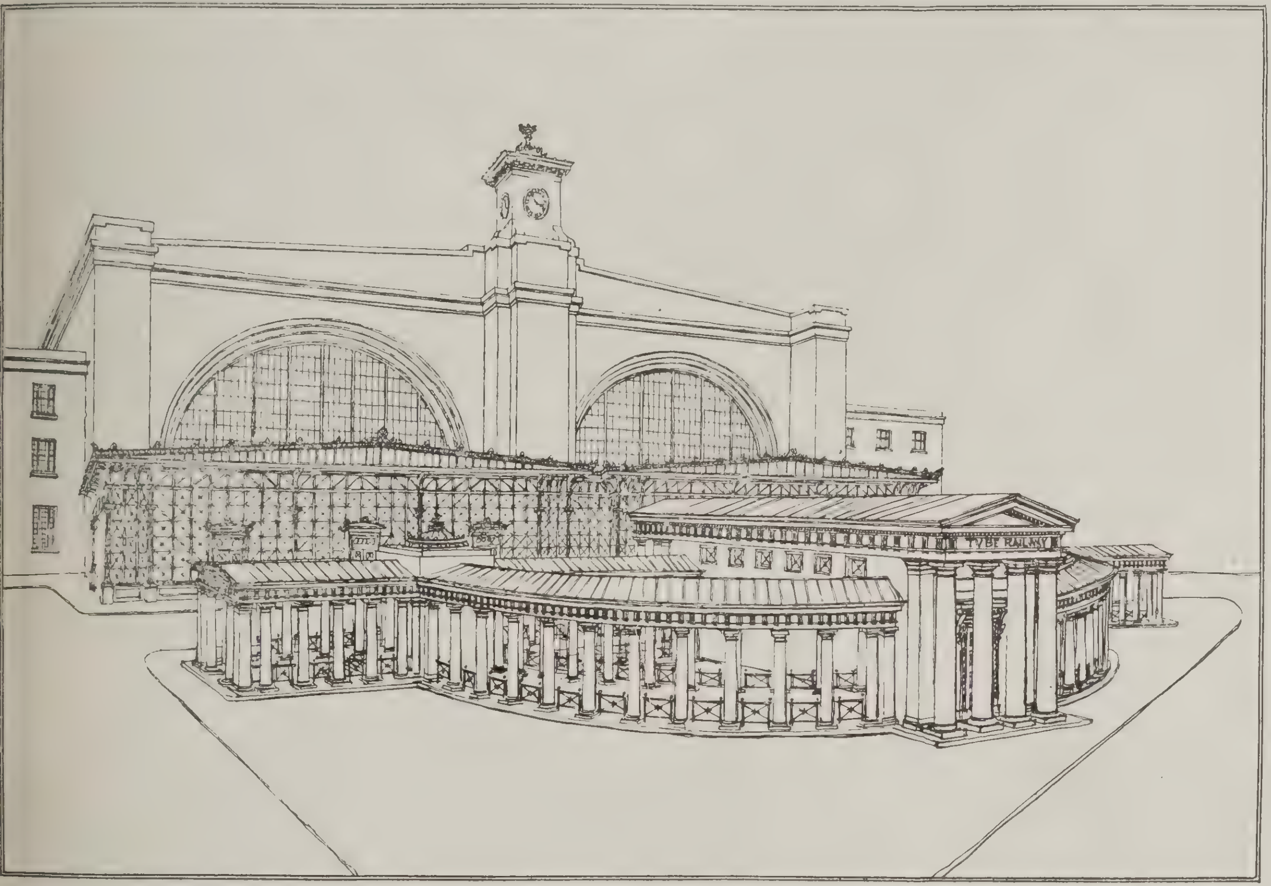


KING'S CROSS STATION COMPETITION: DESIGN PLACED FIRST. BY BINGHAM CARRE.

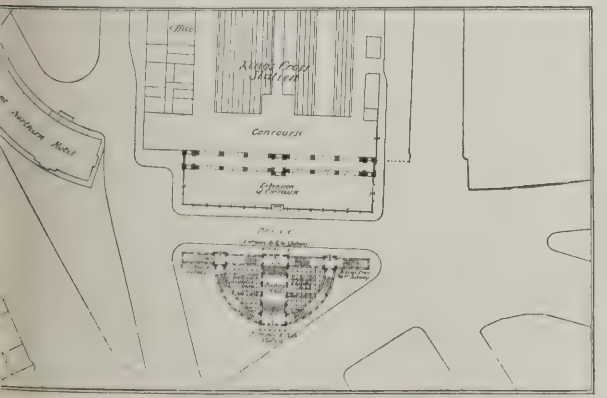
KING'S CROSS STATION COMPETITION.

REPORT OF ASSESSOR.

HE number of drawings and the quality of the designs submitted for the above are a matter of gratification to the promoters. The majority of competitors, however, did not sufficiently grasp the ditions of the nature of the problem. In only e cases was any serious attempt made to remedy feature which might be justly termed a defect he present design, viz., the horizontal line above arches, which does not give a sufficient weight of erial over the centres. When twin features form chief expression of a design as at King's Cross, s usual to connect them with a third feature. e façade of Gare Montparnasse in Paris is an mple, and numerous instances showing how the e problem has been dealt with occur in Gothic itecture. The present design at King's Cross fulthis common law in composition; but the contrast between the main horizontal line and the strong vertical lines of the central turret is too insistent; the arches, although grand in scale and expressive of the dual train sheds, appear unsatisfactory mainly because they are insufficiently loaded.



KING'S CROSS STATION COMPETITION: DESIGN PLACED SECOND. BY HARROLD NORTON.



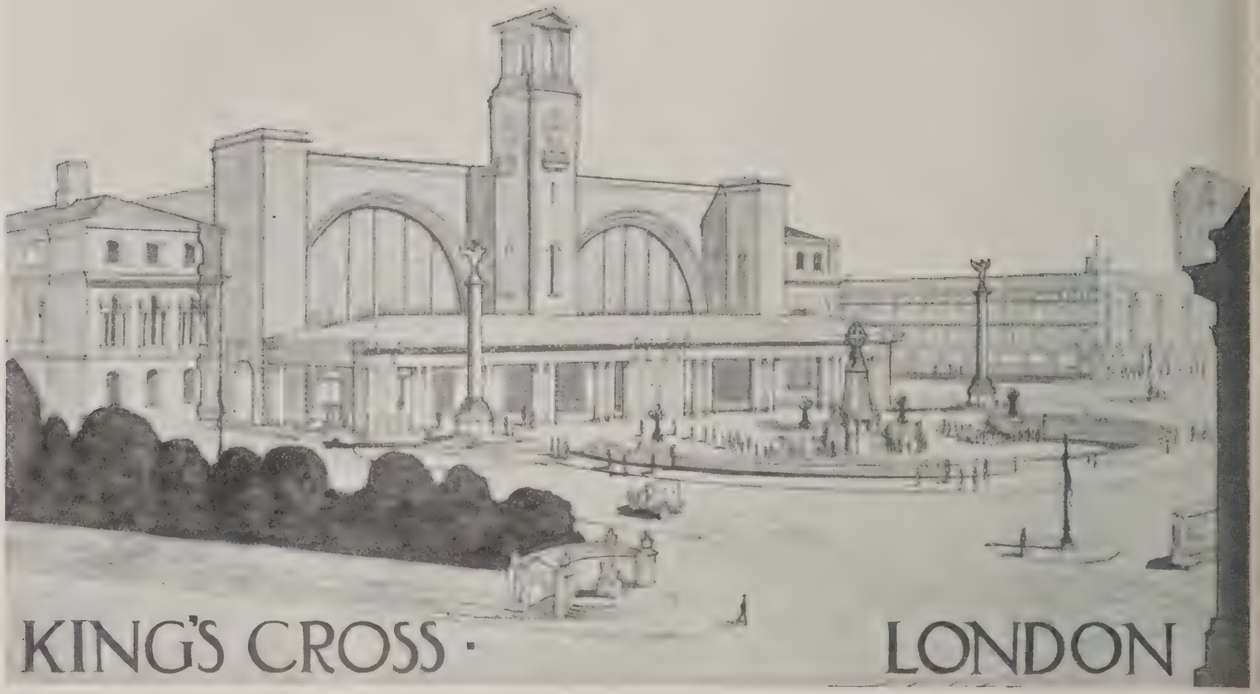
PLAN OF DESIGN PLACED SECOND.

The Winning Design.

Taking the Gare Montparnasse as a type embodying the right treatment for this composition, and considering the attributes of the existing design, two methods for improvement suggest themselves. The first is the raising of the blocking course over the arches to form a pedimental feature dominated by the central turret; the alternative is the raising of the blocking course to form a semi-pediment unifying the whole structure. There is little to choose between these methods. The winner of the competition, Mr. H. B. Carre, adopted the former method, but failed to carry it to a logical conclusion. He certainly produced a satisfactory treatment of skyline, although the dumping of two stone pediments on top of the horizontal blocking course is at variance with the organic character of the arches. This design practically leaves the character of King's Cross unimpaired. The clearance of the site in front of the station is a feasible improvement, and the buildings for the Underground Railway are rightly considered to be below the level of the pavement.

Second Premiated Design.

The second premiated design, submitted by Mr. C. Harrold Norton, provides a very pleasant solution in so far as the station is concerned; indeed, it would be hard to conceive a more reverential treatment which



KING'S CROSS STATION COMPETITION DESIGN PLACED THIRD. BY THOMAS BRADDOCK.

embodied such a slight alteration. Mr. Norton's design includes the new building (above the pavement level) for the Underground Railway; but although the group of buildings suggested in the perspective sketch are perfect in themselves, the author disregarded the conditions, which distinctly stated that the space in front was to be kept comparatively clear, and the station buildings, etc., removed below the pavement.

Third Premiated Design.

The third design, by Mr. Thomas Braddock, scores particularly in the treatment of the foreground, but the main station façade is altered beyond recognition. The clock turret is shown increased in height and apparently in the perspective sketch evoked an answer from distant Pentonville. Mr. Braddock's detail is exceptionally workmanlike, and the plan and entrances to the underground station are well arranged.

Unplaced Designs.

Design No. 4, submitted by Mr. Leslie Wilkinson, provides a very good treatment, but one totally inadmissible on the score of cost. This scheme relies for its effect on the introduction of a wide eaves cornice running between the tower and the pylons at either side. Mr. Wilkinson evidently considers that King's Cross is rather dull and needs furbishing up, but the cost of his scheme placed the design out of the running.

No. 5, by Mr. J. E. Kuhl, is a dignified treatment of the front with alterations to the shelter in the foreground, and suggests raising the blocking course slightly in a horizontal line.

No. 6, by Mr. R. Mackellar, is a design following the Glasgow Art Classic School. It practically amounts to a new front.

No. 7, by Mr. Llewellyn Daniel. This design treats for pediments at the right place but in the wrong way, and results in the subordination of the clock tower within piles of masonry.

No. 8, Mr. George E. Styles, designs an entirely new front, which would cost about £20,000 to rea It follows that type of Art Classic which appears in French journals at spasmodic intervals.

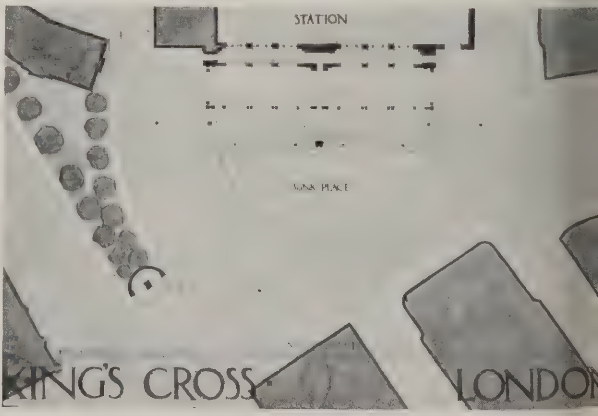
No. 9, Mr. J. R. Bryce, submitted a sheet of att tive sketches. Apparently the author thinks fault inherent in the clock tower, and he allows creased accommodation for a very large clock.

No. 10, by Mr. John Dickenson. The author felt need for the drastic improvement of the whole f and spoiled a reasonable composition by introdu a colonnade of heavy Doric columns at the level of concourse, besides removing the clock tower, whic a pleasant feature.

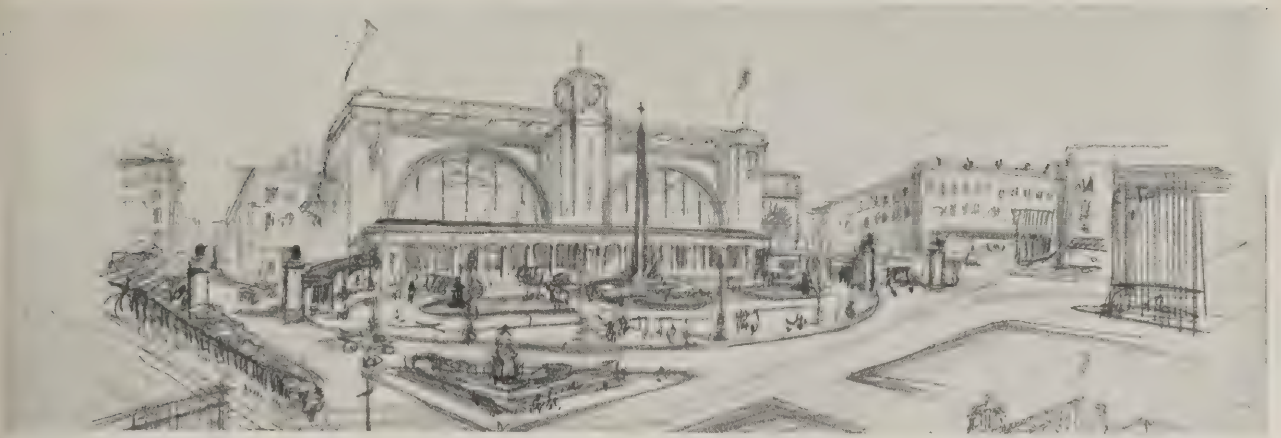
General Observations.

The growing enthusiasm for architecture for its sake among architects and students is a welcome s Notwithstanding the small sums offered as premiu numerous designs exhibiting painstaking labour v submitted, and the authors are to be congratulated their enterprise in dealing with a type of problem, solution and carrying out of which are within the sc of practical politics.

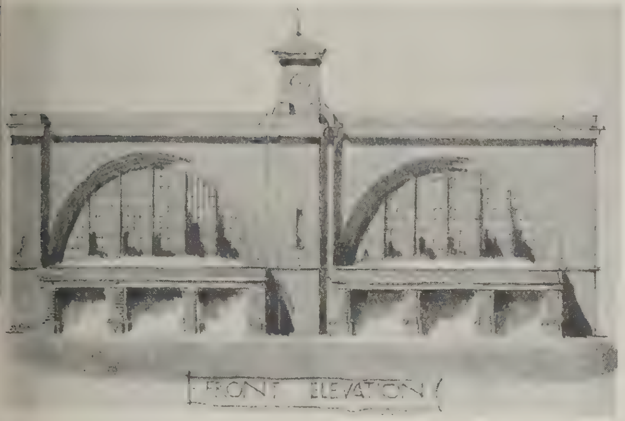
A. E. F



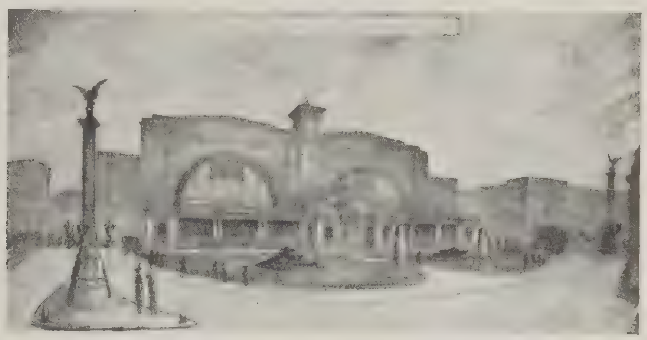
PLAN OF DESIGN PLACED THIRD.



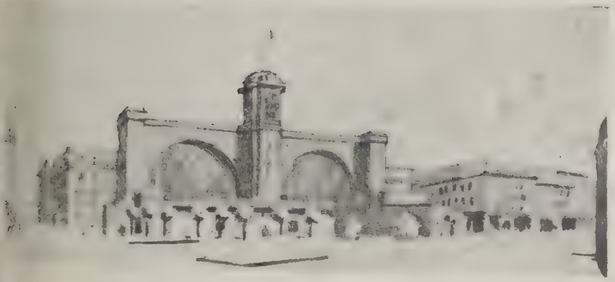
By Leslie Wilkinson.



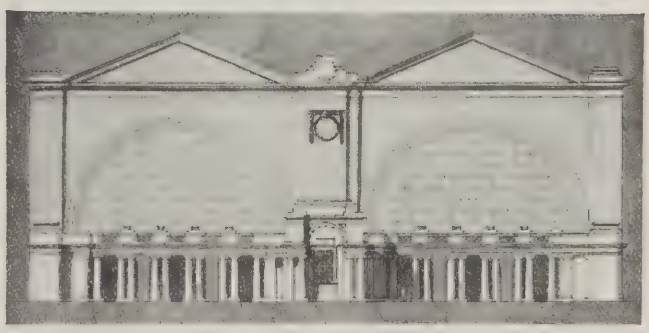
By J. E. Kuhl.



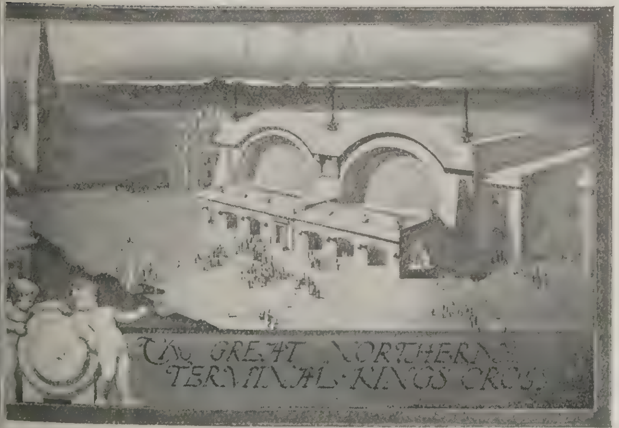
By Llewellyn Daniel.



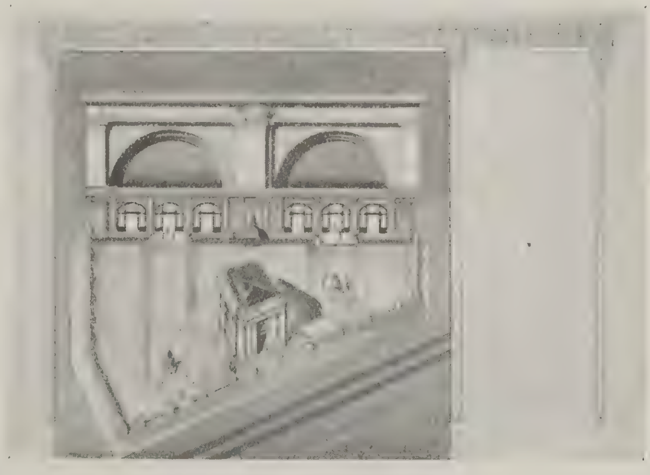
By G. R. Bryce.



By John Dickinson.


THE GREAT NORTHERN TERMINAL·KINGS CROSS

By George C. Styles.



By R. Norman MacKellar, A.R.I.B.A.

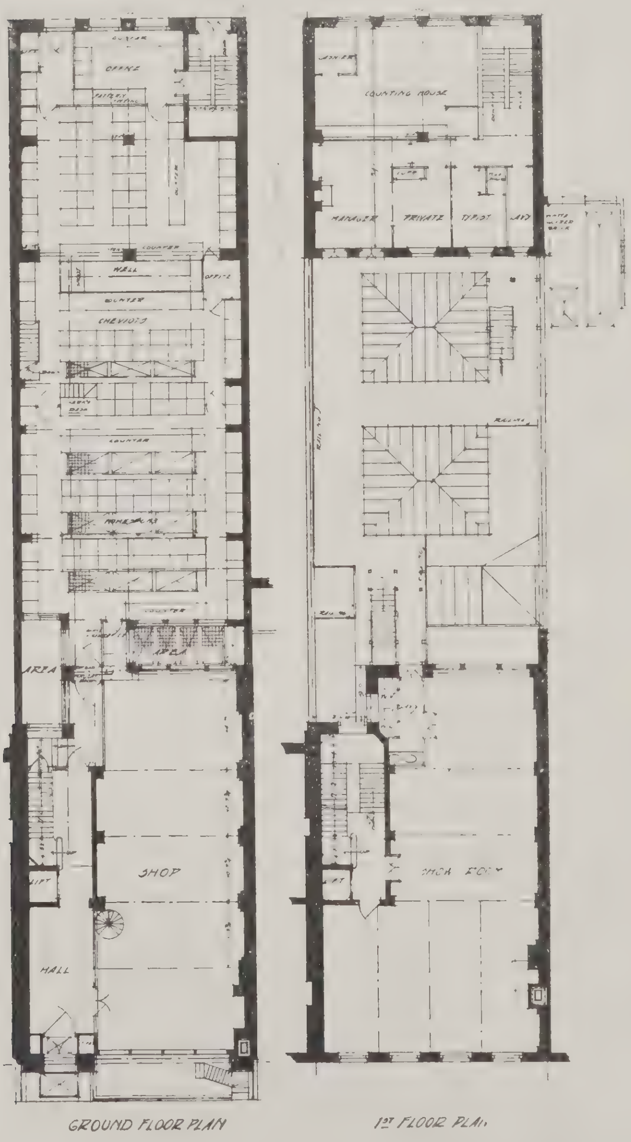
KING'S CROSS STATION COMPETITION: A SELECTION FROM THE UNSUCCESSFUL DESIGNS.

THE JOURNAL ILLUSTRATIONS.

An important feature of this JOURNAL being the illustration of current architecture, the Editors are always prepared to consider photographs of recent work that architects may care to submit with a view to reproduction. When the illustrations are given as full-page plates, twenty-five copies on art paper are regularly sent to the authors concerned. The Editors would like to point out that many conditions, which may not occur to architects, cover the selection of illustrations for a technical journal, and that when photographs are not used it does not necessarily imply that the work is not worthy of publication: it may happen that at the moment the illustrations do not fit in with the general scheme. All unsuitable material is promptly returned.

For convenience in filing plates for future reference, a special portfolio has been prepared. All readers having, or placing, a standing order with a newsagent to supply the JOURNAL each week for twelve months can secure one of these portfolios free of all cost, by sending in an application to the offices at Caxton House, Westminster. Extra portfolios can be obtained price 1s. each (postage 3d.).

As the above offer will be withdrawn at the end of the present month, all those who have not yet made application for a free portfolio are urged to do so at once.



WAREHOUSE, 4, NEW BURLINGTON STREET, LONDON, W.
NIVEN AND WIGGLESWORTH, FF.R.I.B.A., ARCHITECTS.
(See also Plate in this Issue.)

CORRESPONDENCE.

The Editors disclaim all responsibility for the statements made or op expressed by correspondents, who are asked to be brief, and to write on o only of the paper.

Hale Grove Gardens School Competition.

To the Editors of THE ARCHITECTS' AND BUILD JOURNAL.

SIRS,—I much regret to find that the notice vet the competition for a school at Mill Hill was sent from my office on the 7th inst., headed simply " Hill School Competition," instead of bearing the description "Hale Grove Gardens School Competi Mill Hill." I should mention that it is the custo style a competition briefly by the name of the dis where the building the subject of the competition be erected, and in so designating it in this case the was lost sight of that the notice might be taken to to the Public School at Mill Hill, which is wi known as "Mill Hill School." I am extremely s that this unfortunate oversight should have been cause of annoyance to the authorities of Mill School, and should be greatly obliged if you w allow me to express in your columns my sincere re at its occurrence.

IAN MACALISTE
Secretary, R.I.B.A.

The Building Trade Dispute.

To the Editors of THE ARCHITECTS' AND BUILD JOURNAL.

SIRS,—From the information in the Press it w appear that the parties in this matter, viz., Master Builders' Association and the trade un seem so near to adjustment of this deplorable pute that it would be a wicked thing if stiffness hauteur or even militancy on either side should c a prolongation of the loss and suffering which we of. I venture to make a suggestion, which I prepared to back personally, that the Master Buil having expressed their willingness to accept guarantees which the National Federation Concili Board have promised, the remaining minor quest which are only matters of detail, should be referr and that forthwith—to arbitration (and it is certain a suitable arbitrator can be found and agreed to); that all parties be urged to adopt this course, and in the meantime (the guarantees holding good) trade and workmen resume business right away, lea the Arbitrator to settle all matters remaining standing for settlement. Such settlement or dec by arbitration must be loyally accepted and acted by all parties. I trust this suggestion may have support, and the public should use its big stick any party refusing to arbitrate.

HOWELL J. WILLIAM

[This communication came just too late for inse in last week's issue, and we trust very sincerely by the time it is published the excellent a it offers will have been rendered superfluous.— A. AND B.J.]

Architecture in Australia.

To the Editors of THE ARCHITECTS' AND BUILD JOURNAL.

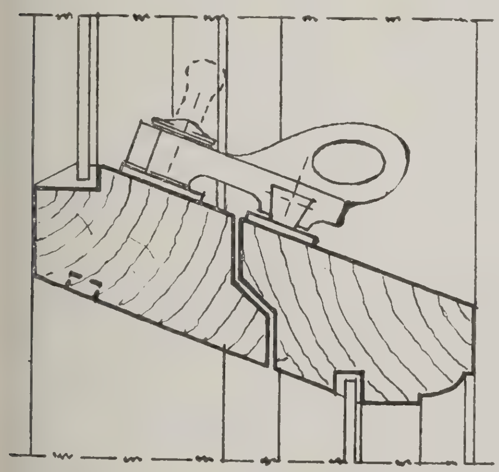
SIRS,—In your issue for January 7th, page 12, have a note entitled "Architecture in Austral in which you kindly take notice of our Preside G. Sydney-Jones, A.R.I.B.A., address to Institute. We are very pleased to see *some* n taken of this important part of the British Em we thank you sincerely for doing so. At the e time, we do not want this, the most important in the Commonwealth, altogether eliminated. say in your article, "In the Presidential ·ess, recently delivered before the Institute of ıitects of New South Wales, *in Melbourne*, Mr. ;ydney-Jones, etc., etc." Now, Sirs, the city the ·ess was made in was the capital of New South ·s, the seat of the Commonwealth, Sydney, Melbourne: the mother city of Australia, with pulation of 750,000 inhabitants, the fifth city opulation of the British Empire (leaving out a), and with 150,000 more people than Mel-ne. The Institute of Architects of this, the test city in the Southern Hemisphere, is the st allied institute with the R.I.B.A. in all the sh Empire. We, therefore, are justified in re-ting you, Sirs, not to altogether eliminate us, we would esteem it a favour if you will kindly ish this letter in your next issue. Thanking you ıticipation.

NICHOLAS SHIELS, B.A.,
:or "The Salon," the Journal of the Institute of Architects of New South Wales.

A Case and Sash Window Improvement.

he Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

RS,—In an early edition of "Specification" 4), there appeared a well-written article, sug-ing various improvements on the ordinary case sash window. Another suggestion may now be ɛd in regard to the meeting-rails, the necessity which, if the trouble be taken to examine the le top surface of but a few of these at random, be surprisingly evident. Even where otherwise pulous cleanliness is observed, the flat ledge formed usually presents a dusty, uneven, paint-ered surface, which is difficult to keep clean and hich the condensation water is retained. The ht of the top of rails is generally just above eye , and therefore escapes notice.



e enclosed sketch detail would seem to offer a dy and the small angle (15 deg. to 20 deg.) at h the rails are set would present no difficulties nstruction. A small drip groove outside might dded in exposed situations. The sash fastener l be much more easily screwed up than when on at, but the fixing plates would have to be about arter of an inch farther apart to clear the handle opening the sashes, and the catch slightly fied to suit. A flattened knob is shown to make xtra plate clearance less, and shaped to offer or no catch for the blind. Brass fixing screws ld be insisted on *and seen.*

HYGIENE.

The College of Masons.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—In reply to the letter by "Geometer" in a recent issue of the Journal, I have much pleasure in forwarding the following particulars regarding the College of Masons. Possibly other readers may also be interested.

The College of Masons was founded in the year 1892 by Mr. Lawrence Harvey, F.R.I.B.A., Professor of Stereotomy, School of Arts and Crafts, Geneva, Switzerland. Mr. Harvey is at present Technical Adviser to the College. The objects of the College are as follows:

To promote the study by masons of architecture, building construction, and geometry applied to masonry.

To arrange meetings for lectures, demonstrations, and discussions on the above subjects.

To recomend to architects, builders, and others, members fully qualified to act as clerk of works, general foreman, foreman of masons, and setter out.

Meetings are held fortnightly during the winter, and informal meetings once a month during the summer.

There is a small entrance fee and an annual subscription.

I shall be pleased to answer any inquiries addressed to me as above.

For the College of Masons,
GEO. OLDERSHAW,
Hon. Secretary.

Cope v. J. Lyons and Co.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—We see in your issue of April 15th, 1914, you state that this action was settled on the terms "that a sum was to be paid to the plaintiff in respect of his costs." We would point out that this is inaccurate. After the evidence of our experts, Mr. Herbert Phillips Fletcher, F.R.I.B.A., F.S.I., A.M.I.C.E., and Sir A. Brumwell Thomas, F.R.I.B.A., as to the effect that the defendants' building would have upon the easement of light and air appertaining to our client's premises a very substantial sum in addition to costs was offered to our client and included in the settlement arrived at.

LETTS BROTHERS.
Solicitors to Mr. F. T. Cope.

R.I.B.A. Examinations.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—The R.I.B.A., having revised their system of examinations and stiffened them up, seem to have shown a lack of consideration towards their voluntary victims.

In the first place, is it necessary to arrange the Intermediate Examination so that provincial students sitting in London are compelled to incur the expense of a week-end in town?

Secondly, cannot the results of the examinations and final designs be expedited?

A student, having submitted his final design, naturally commences to read up, yet at the end of six weeks his design may be rejected (the result being first announced in the professional papers before he receives official news), and he has to drop his reading to prepare another design. Result: Sir weeks more or less wasted.

Surely, the examinations being conducted fairly and above board, the results could be published without waiting to be swathed in red tape at committees and councils.

PATIENCE.

PROFESSIONAL PRACTICE IN ARCHITECTURE.

BY MAX CLARKE, F.R.I.B.A., VICE-CHAIRMAN OF THE PRACTICE STANDING COMMITTEE.

IN his paper on this subject, read before the Royal Institute of British Architects last week, Mr. Max Clarke declared that he had nothing new to say, and that anything he might say was addressed only to the junior members of the profession. The lecturer resumed:

It appears to me that if I divide the remarks I have to make under certain heads it will be easier to deal with the point which I have in my mind. The sequence in obtaining and carrying out a commission is usually as follows:

1. Receiving instructions from the client.
2. Preparing preliminary sketches.
3. Making an approximate estimate of the cost.
4. Preparing the working drawings, some details, and the specification.
5. Procuring tenders for the work.
6. Arranging a contract between the client and a builder.

Receiving Instructions.

Under this head one's thoughts naturally turn to the schedule of charges, as to which there has been difference of opinion of late. Personally I am not in agreement with the scale of which we have heard so much. It is to me quite inconsistent that an architect should get, say, 6 2-3 per cent. on a small house or lych-gate, to cost, perhaps, £1,500, and the same percentage on a warehouse, factory, or the like. A house may require many drawings and details besides a comprehensive specification; the factory probably very few drawings, still fewer details, and a very brief specification. The much more reasonable way to charge is on a sliding-scale based upon the nature of the work as well as on the cost. I see in the Journal of March 1[illegible], page 290, that such a schedule has been proposed by the American Institute of Architects. It must be recollected that the proposed schedule of charges of the R.I.B.A. is not, as far as I am aware at present binding upon any of the members; but it is not clear in my mind what the penalty is for those who undertake a commission at, say, 2½ per cent. on a building of ordinary class, and perhaps include the preparation of quantities in the above modest remuneration. For my own part, I think *the man* should be the first consideration. Consider the case of a youth, with perhaps his first and only job, having time to do the whole of the work himself. Payment at the rate of 2½ per cent. on a £10,000 job (=£250) would be quite a good thing for him. But for members of the Institute who, I may say, walk on the higher planes of the world architectural, for this same work a commission of 10 per cent. would be reasonable, and I think they ought to charge it.

Preparation of Working Drawings, Details, and Specifications.

I shall now presume that the sketch design has been approved and the "approximate estimate of cost of cubic measurement" has been made, and that this also meets the views of the client. This brings us to the fourth subject for our consideration—viz., making the working drawings.

In the preparation of working drawings it appears to me that too much is left to the imagination; a paucity of elevations, if not of architectural importance—sections with as little detail as possible shown thereon, and generally taken along the line of least resistance—foundations left entirely to speculation, and in many instances a total absence of figured dimensions. This style of drawing is more the result of habit than anything else, leaving the technical points to be decided by the quantity surveyor, the person who gets out the details, the builder, or more generally his foreman.

At the present time it is a very usual custom for the quantity surveyor to write the specification. This has its advantages and also disadvantages; one of the former, so far as the architect is concerned, is that it saves him the trouble and expense of doing it himself. As to whether the custom is a good one or not I am not prepared to give an opinion: but if the surveyor does write it, after the quantities have been prepared, the work must lose some of the individuality of the architect. The work of taking off quantities, as practised in the South of England with London as a centre, always strikes me as a matter of guesswork. In the first place the surveyor guesses what he thinks the architect means or would like, and then the detailer guesses what the surveyor has provided.

Arranging the Contract between Client and Builder.

In arranging a contract, I need hardly remind you that the various documents should agree. Sometimes we hear of cases in the Law Courts where the specification says one thing and the articles of agreement another. If quantities have been prepared, it will be a question whether they should form a part of the contract. Opinions on this point are divided, some preferring a "lump sum" contract, which means that the drawings and specification taken together are the documents which form the basis of the contract and on which the architect has to rely in carrying out the work. In cases where this system is adopted the drawings and specification require to be prepared most carefully, as any item omitted from them taken together will probably be claimed as "an extra" if ordered by the architect, although it may be included in the quantities. If, on the other hand, the quantities form a part of the contract, every item provided in the bill is included in the contract, whether shown upon the drawings or not. It seems to me the latter method is the fairest one to adopt; nowadays when quantity surveying is brought to such perfection and there are so many expert and able men engaged in that profession, there is little fear of any serious omission from a bill.

As the form of contract, which is generally known as the R.I.B.A. form is frequently used, I will now proceed to give you some of my views on that document. My own opinion is that the following clauses especially require revision.

In Clause 1 the words relating to the custody of the drawings, specification, and bills of quantities should be deleted from this clause and put in a separate one.

I object to Clause 3 very strongly. The builder should send in his quantities fully priced out at the same time that he sends in his tender. There seems to be an impression abroad that the quantities are the special property of the contractor, and for
his use only. I do not consider this
should be, the case. The quantitie
for the use of the client or his agent
as much as for the use of the contr
There is too much ignoring of quar
amongst architects nowadays.

Clause 5 requires redrafting. Fo
stance, I am not clear if it cover
Health Insurance payments, or wheth
no mention was made in the specific
or other document as to paying fees t
authority, this clause in the contract
make the contractor liable for the pay
without charging the employer any e

Clauses 6, 7, 8, and 9 might, i
opinion, have slight amendments
which would improve the meaning
make it clearer.

I think Clause 10 should be revise
the architect should have access t
works at *all* times; the word "reasona
is a mistake in this instance. It is
the time when the contractor does not
the architect on the works, that the
finds out most about what is going o
the way the work is being done.

The clause relating to the clerk of w
No. 11, if it is necessary at all, shou
added to by providing for attendan
the clerk of works, and assistance in t
particulars and dimensions, as a clai
time occupied in rendering such assis
is sometimes made in contractors' acc

Clause 12 should be redrafted so
include alteration, variation, or dev
from the drawings or specification, w
necessarily involving an extra or omi
Clause 13 and Clause 14 should be re
I was asked my opinion lately as t
position of an architect who had gi
final certificate in which an amount w
cluded for surveyor's fees for meas
the variations. The client objected t
not in consequence of the amount
paid for builder's work, but because
amount of the surveyor's fees. The
tion was raised as to how far an arc
could pledge his client's credit (this is
it practically comes to) for the surv
fees. I could not answer the que
Perhaps someone here can. The p
of Clause 17 which deals with defe
sub-contractor's work being made go
the general contractor, requires rev
as also does Clause 20 (Sub-Contract

Clause 21, dealing with "Dama
Person and Property," is, of course,
lete, and should be altered at once.
not altered it would be advisable to
the words "under the Workmen's Co
sation Act, 1897, or any amendment
of" and put a red "sticker" on the
to the effect that anyone using the
should protect the employer a
claims, by insurance or otherwise.
Practice Committee have already
mitted a revision of the clause, but,
as I know, the builders, by their Ins
do not agree to any alteration at pr
If this is the case, there is all the
reason for the R.I.B.A. issuing a fo
their own.

With regard to Clause 23, which
with the "date of completion and
sion of time," it would be interesti
have the opinion of some of those p
as to whether, in the case of extra
being ordered, the architect should
before the extra work is commenced
extension of time will be allowed fo
special extra work, or whether it is

ovince to fix the amount of the exten- the completion of the work.

ıse 27, "Prime Cost, Meaning of," l in my opinion, be revised, so that nounts "for goods to be obtained xed by the contractor" shall be paid pended as the architect shall direct, similar manner as the "provisional ' mentioned in Clause 28; the dis- for cash should be eliminated from ause, and various other alterations to bring the clause thoroughly up to

ıse 28, "Provisional Sums," requires n in many ways; one point in it has the subject of enquiry—viz., the ng of the words "After allowing ta for the contractor's profits." It ı pine block floor was provided, for ce, in a porch, on which the con- put a profit of 5 per cent., and the vas altered to an expensive marble osting four times as much, the area ning the same, would the contractor titled to four times the amount of In other words, does "*pro rata*" on the amount of work done or the of it? It would be made quite clear ie such words as "on the amount ded" were inserted after the words *ata.*"

ıse 29, "Artists, etc., engaged by yer," should be altered so as to allow ployer to engage any person he may to do any work for him, within the ng or outside it on the site. The , as at present worded, seems to that only decorative work can be l out without the consent of the con- , which was never, I imagine, the al intention.

egard to Clause 30, "Payment of cate," the lecturer said he did not mpetent to criticise this, and he had ggestion to make as to Clause 32, tration," beyond expressing an n that some scheme might be d which would enable redress by ition in small cases to be conducted re economical lines than at present. t witnesses, for example, might often pensed with. Their views were fre- y a matter of opinion of little value iding the real issue.

did the last two lines of the clause, read, "This submission shall be d to be a submission to arbitration the meaning of the Arbitration Act, apply to work done in Scotland or d, where the Act did not apply?

Discussion.

R. L. Harrison, proposing a vote nks to Mr. Max Clarke, said it was der to him that the R.I.B.A. form tract had not been torn into shreds ago. The document was the result ferences between the Royal Institute ie Institute of Builders, but, in his n, they would never again get such ment approved by builders. They find before they got it done that ad to begin all over again. He sug- that the Royal Institute should ıp a form of their own; it would be f general adoption.

Boydell Houghton, seconding the ı, said the Form of Contract had e an anachronism. But, apart from ange of events, he failed to under- the genesis of some of the existing s. Some were hardly concerned ie interests of the building owner or contractor. Architects had no inte- they were only endeavouring to at a fair contract between the em- and the contractor, and probably they were not quite so keen in holding out for stipulations for the building owner as they should have been. The arbitration clauses were inserted, no doubt, at the instigation of the builders, but they had now got a clause which was not fair to the building owner and did not always operate to the advantage of the builder.

Mr. F. G. Rice (President of the Institute of Builders) said that as the R.I.B.A. Form of Contract had been adopted, not only by the Institute of Builders, but by the National Federation, a powerful and representative body of builders, it would not be quite fair to eliminate builders from any future conference. The Arbitration Clause was put in at the instance of the builders, but it was never expected to be used to the detriment of either party. So long as human nature was what it was they would never get through without disputes. The sub-contracting specialist, he thought, should be selected by the architect. But it came hard on the builder who had got all the machinery to do the joinery, for instance, to have that work taken from him. He pleaded, in conclusion, that when the proposed form of contract and of sub-contract came up for consideration they would accord the same privilege to the builders as to the sub-contractors, and allow them to put forward their case, so as to obtain a form of contract which would be acceptable to all.

Mr. William Woodward, having expressed himself strongly in favour of securing a form of contract which would satisfy all parties to it, said that trouble with the present form was only brought about by the legal people at the Courts of Justice, who put their own interpretation upon its clauses.

Sir Henry Tanner expressed the opinion that the quantities should form part of a contract. Every contract had its weaknesses, which were invariably found out. It seemed to him that it should be the duty of the Practice Committee to keep the form of contract as far as possible up to date, but he very much doubted whether they would succeed in making it perfect.

Mr. Blanco White said a contract was a matter of compromise; the builder's point of view was not that of the architect. A contract drafted by one party alone must necessarily be unjust, though perhaps quite unconsciously, to the other. He advised all young architects to adhere to the R.I.B.A. Form of Contract until they were able to draft a better.

Mr. Edward Greenop said he was glad to hear Mr. Blanco White's last remark. Many cases had been decided on the existing form.

Mr. Max Clarke, in reply, said the R.I.B.A. Form of Contract was a very good one when it was originally drawn up; its imperfections were the result of altered conditions. He had never suggested that the young man should draw up his own contract. The present form might be bad, but they had got nothing better. He was prompted to suggest that the R.I.B.A. should draw up their own form of contract, as a result of a recent meeting of the Institute of Builders, when it was decided not to deal with the general form until the sub-contract form had been settled.

Before the reading of the paper the decease was announced of Bernard William Hurt Brameld, Fellow, elected 1903; and of Willim Laidlaw Carruthers, Fellow, elected 1892.

The annual general meeting will be held on Monday, May 4, when the Council's annual report will be presented.

SOCIETY OF ARCHITECTS' ANNUAL DINNER.

The thirtieth annual dinner of the Society of Architects was held at the Hotel Cecil on the evening of Tuesday, April 21, when the chair was occupied by the President, Mr. Percy B. Tubbs, F.R.I.B.A. Among those present were the Right Hon. Herbert Samuel, M.P., the Right Hon. Lord Saye and Sele, Colonel Sir Thomas H. Holdich, Mr. Justice Bailhache, Sir Laurence Gomme, His Honour Judge Atherley-Jones, K.C., Sir Henry Tanner, Messrs. A. O. Goodrich, A. W. S. Cross, George Hubbard, H. V. Lanchester, A. R. Jemmett, R. Goulburn Lovell, W. Edward Woolley, H. E. A. Cotton, A. A. Hudson, K.C., F. G. Rice, W. S. Wallis, H. C. H. Shenton, E. P. Wells, F. R. Yerbury, E. C. P. Monson, Charles E. Jackson, Major R. Cecil Davies, Colonel F. S. Leslie, C. McArthur Butler, and many others.

The customary loyal toasts having been honoured,

Mr. E. C. P. Monson, F.R.I.B.A., V.P.S.A., proposing the toast of "The Houses of Parliament," having made a graceful reference to the interest taken by Lord Saye and Sele in the Society and its work, proceeded to deal with the question of housing and town-planning, pleading for a cheaper and easier means of procedure. Much could be done by local authorities if they were not impeded by landlords. They had had prepared, he continued, a Registration Bill, which had been approved by counsel, but had not yet been put before Parliament. When this was done he hoped they would have the assistance of Parliament. He looked forward to the time when architecture would be a limited profession. It was to the interest not only of the Society, but of the community at large that only qualified men should be allowed to practise.

Lord Saye and Sele having replied for the House of Lords, the Right Hon. Herbert L. Samuel, responding for the House of Commons, assured his listeners that when the Registration Bill came before Parliament it would receive the careful consideration of His Majesty's Government. London, nowadays, he continued, was developing, and in course of time it would be a splendid city. But most of the British industrial towns fell below a standard that was even tolerable, and one could not help feeling depressed by comparing them with those of Germany and America. To change the present was very hard, but they had to set their hands to the work so that the future should not repeat the errors of the past. With regard to town-planning, the department with which he was associated had already dealt with 220 town-planning schemes proposed by 200 separate authorities. Seventy-eight schemes had been sanctioned, involving 116,000 acres of land. The movement was in its infancy, but it was growing, and growing rapidly. Mr. Samuel concluded his speech with a reference to the pollution of the air by smoke. He was taking the first step towards putting an end to this nuisance by appointing a strong committee (which included Sir Aston Webb) to investigate the question from the scientific and practical point of view.

Mr. Justice Bailhache, proposing the toast of "The Society of Architects," said that when he was at the Bar he had a good deal to do with architects and builders, and after he was made a judge the first case that came before him concerned an architect, a builder, a quantity surveyor, and, of course, the building owner. The judgment that he delivered had this merit: it gave the liveliest dissatisfaction to all parties concerned. Having referred to his long personal intimacy with Mr. Tubbs, his lordship concluded with an amusing comparison of the architect with the barrister, greatly to the advantage of the former.

Mr. Percy B. Tubbs, in reply, said that the thirtieth year of the Society's existence found it in a very sound and strong position for carrying on its work in the direction of the objects for which it was founded.

The Society had always prominently identified itself with architectural education, in the belief that the practice of architecture demanded that the practitioner should first of all have received a liberal education and have been properly trained in the many subjects embraced under modern conditions of practice before he was permitted to hold himself out to the public as a person capable of practising the art. After a reference to the establishment of the Architectural Ateliers, the first of which, he said, formed in London more than a year ago, had achieved results which had justified its promoters in undertaking the responsibility, Mr. Tubbs proceeded:

The question then arose as to the position of the fully equipped architect in relation to that section of the public having dealings with architects, and how the latter could distinguish qualified from unqualified practitioners. It was a popular fallacy that everyone calling himself an architect had been properly educated and trained for that profession. That, of course, was not necessarily the case, and there were numbers of persons who used the title "architect" without the least qualification, and who thereby imposed upon the public and frequently brought the profession into disrepute. It was to stop this kind of thing and to enable the public to distinguish between a qualified and unqualified architect that the Society of Architects advocated statutory registration; they had in the past promoted Bills in Parliament to that end, and at the present moment had a Registration Bill on the stocks ready to introduce into Parliament at the first favourable opportunity. The present occasion was not one on which he wished to introduce any contentious matter; they were gathered together for quite another purpose, but he felt that the members would expect him to make some statement regarding the Society's registration policy, and he could do that at once by stating that the policy of the Society in this respect had never changed during the whole thirty years of its existence, and it was not likely to do so. They were pledged to accomplish statutory registration, and it was their intention to continue to promote that object so long as they held those views. Some few years ago a proposal for the fusion of the Society with the R.I.B.A., in view of the promotion of a Registration Bill by that body, was on the eve of being consummated. The fates, however, decreed otherwise, and within the last few months the Institute had changed its policy and was coming forward with a suggestion for a voluntary system of registration within the Institute by means of a revised charter. It was, of course, quite competent for them to do so, but what he wished to point out was that such a scheme was not, in the opinion of the Society, one which would stop the abuse which existed in the profession in the present day, whereby any person could call himself an architect. As a matter of fact, it would accentuate it, for it was proposed that certain persons should be entitled to call themselves "chartered architects" and others "registered architects" under the ægis of the Institute. It was obvious, therefore, that the very men who, under statutory registration would be prevented from describing themselves as "architects" would, under the proposed scheme to which he had referred, have a monopoly of the title.

He sincerely hoped that eventually the views of the two parties might be synchronised, and some compromise effected which would enable them to agree once for all on this question of architectural politics and enable them to devote their whole attention to other matters more congenial to them as architects. He still thought that his suggestion, made some time ago, that the Institute should look after the art of architecture and leave the Society to deal with the business side of the profession, was one which had considerable possibilities.

There were just one or two matters of what he would call domestic interest to which he would like to refer, because of their bearing on the profession generally. One was the establishment by the Society of an advisory committee, backed by a professional defence fund, for the purpose of assisting members who might be involved in litigation on questions of principle affecting the whole profession. They had not yet been called upon to take up a case of this kind, but in at least one instance the fact that such facilities existed induced the opposite party to settle the matter out of Court. They also had evidence that the high standard of professional ethics which was insisted upon in the Society was of the greatest moral support to its members in enabling them successfully to resist suggestions which were sometimes made to them, he was sorry to say, by public bodies and others, such, for instance, as inviting them to compete for professional work on the basis of fees. A matter which the Society had recently taken up was an investigation of the reason for the high cost of building in London with a view presently to endeavouring to show that the cost of building in this country is very much greater than in others and to find the reasons for this. It was a somewhat colossal undertaking, and the inquiry was one which must extend for many months, but even if they were only able to point out the weak spots and suggest a remedy he thought they would have accomplished a useful work. One of the problems which arose out of this matter was that connected with labour disputes and the methods adopted in this country for dealing with them, as compared with those of other countries. One difficulty was that even where the available machinery in this country had been put into force and disputes had been settled, the parties thereto had ignored the terms simply because there was no legal obligation upon them to carry them out. What was wanted, in his opinion, was statutory powers to make a breach of the terms a penal one.

Colonel F. S. Leslie, R.E. (hon. secretary), proposed the final toast of "The Guests," to which Mr. A. O. Goodrich (Vice-Chairman, L.C.C.) and Mr. W. Edward Woolley (President Surveyors' Institution) replied.

A varied entertainment was provided by a number of artistes during the course of the evening.

REGISTRATION IN QUEENSLA

The "Brisbane Telegraph" of Ma
states that Mr. Chambers, the Preside
the Institute of Architects, waited o
Minister for Public Works (Hon. W
Barnes) on March 3 with a request t
Bill should be introduced for the reg
tion of architects. The Institute
sidered that such a step would bring
an advancement in architecture,
argued that it was necessary, in vie
the modern advances in construction
sanitary and engineering science. It
claimed that similar action had bee
was about to be, taken in the sou
states. Mr. Barnes was told that reg
tion would bring to the profession
qualified and more highly skilled
would protect the public against in
petence, inexperience, collusion, f
and wasteful expenditure; would s
a greater protection of public h
and safety by scientific ventil
of buildings and proper fire-r
ing construction, and by an e
knowledge of sanitary science gener
and would reveal to the public the ex
enced and competent, against the
perienced and incompetent. On beha
the architects, it was claimed for regi
tion (*a*) the placing of the architec
profession on a sound and recog
basis; (*b*) the direction of architec
education in the right channels, as
tioned previously; (*c*) examination of
didates before admission to the rank
registered architects or the issuing
diploma; (*d*) authoritative right to
with all matters pertaining to the pr
sion—that is, with the rights, privil
emoluments, and discipline of regis
architects.

Mr. Chambers handed to Mr. Barn
copy of a draft Bill which had been
pared by the Institute.

The Minister promised Mr. Cham
that the matter would be submitted t
Cabinet, remarking that until the de
of the Bill had been looked into it w
be quite impossible for him to make
promise. Incidentally, Mr. Barnes
dicated that the Government were con
plating action with regard to certain b
ings. He remarked that in trave
round he had noticed that in some st
not far from the principal portions o
cities of Brisbane and South Bris
buildings had been erected in such a
as to be a menace to health and a da
to the public. He had noticed more
ticularly one street in which four
houses had been built with scarcely
division between them. There was
privacy, and altogether it was a cond
of things that should not be allowed t
continued. Action had been taken by
Government in the direction of seeing
such a condition of things should no
allowed in the future. The present
tion was that land could not be cut up
less than 16-perch allotments, but so
as he could ascertain there was nothin
prevent a buyer of such allotments f
putting dwellings on smaller areas.
climate such as Queensland's he thou
an effort should be made to prevent su
state of affairs, especially when there
plenty of room available.

A Skyscraper Gaol.

New York City is about to build
tallest gaol in the world. It is to be
modern office building type of architect
fourteen storeys high. The Board of E
mates has voted £90,000 for the constr
tion of the building.

MODEL ANSWERS TO R.I.B.A. EXAMINATION QUESTIONS.

BY WILLIAM FRISKIN, A.R.I.B.A., ASHPITEL PRIZEMAN, 1914.

'e publish below the first of a series of Model Answers to Questions set for the Final Examination of the Royal Institute of British Architects, held last November.

PROPERTIES AND USES OF BUILDING MATERIALS.

tion 1.—Describe briefly the materials you would select and the reasons :hat would influence your selection of naterials for dealing with foundations on the following sites, the proportions in which you would use them, ınd the tests you would apply to each naterial, viz., limestone rock, peat, :unning sand, clay.

:swer.—Limestone Rock.—No footings ›undations required. The wall rests tly on the rock, which should be ıched out" to receive it if the stratum a slope. Limestone rock will bear eight to eighteen tons per square foot. ks should be filled up with concrete.

at.—Peat, being compressible, re-s special treatment. The concrete be broader and thicker than usual carried down to obtain a uniform m. In special cases an elm timber orm may be used to distribute the ıt over a larger area. If the peat is ually soft reinforced concrete may be The resistance of the soil may be ı as ¼ ton per sq. ft. in ordinary .

nning Sand.—This subsoil requires care. Piling must be employed r the foundations and carried down solid bottom. Reinforced concrete pointed and shod with iron, are now

ernatively the site may be enclosed sheet-piling, also of reinforced con-, to prevent the lateral escape of the il.

ty.—Carry the concrete foundations at least 4 ft. below the surface. Clay y weather cracks, and the concrete d be taken down to ensure that the ce cracks at any rate do not reach ottom of the concrete foundations. ıcrete for foundation work is in the ırtion of 1 part Portland cement, 2 sand, 4 parts aggregate.

ion 2.—What are the advantages of ıill mortar and what are the draw-acks? How do you judge when the ıortar should be taken out of the ıill? Are the proportions of sand to me measured before or after the me is slaked?

swer.—Mill mortar, using an up-to-machine, ought to be better mixed n less time than by a hand process. ıchines where the action is horizontal there is a tendency for the heavier of the mixture to sink to the bottom. is also the danger in all machine s that the grit will be ground down than is desirable. Mortar should be ved from the mill when it takes the ırance of a homogeneous mass, uni-in colour throughout.

proportions of sand to lime are ıred before slaking.

ion 3.—What defects are bricks iable to and how are they selected? Vhat bricks are badly affected by re? What is the result of using ›ricks which vary in size?

swer.—Cracks and flaws, sand-holes inders, lumps of lime, extreme varia-f colour due to unequal burning, and twisting due to excessive moisture during clamping, softness and porosity: these may be said to be the common defects to which bricks are liable. When bricks containing lumps of lime become wet, the lime slakes and splits the bricks. Cracks, sand-holes, and defects generally are detected by striking the bricks together. Hard, sound, well-burnt bricks should give a clear metallic ring when struck. Bricks should be selected at random from the delivery and broken to find out if they are thoroughly burnt. No brick should absorb more than 15 per cent. of its weight of water; it should absorb the water reluctantly and give it up freely at all normal temperatures.

Generally speaking, the denser a brick is, the better will it withstand the action of fire. Underburnt bricks, or bricks containing much free sand, will not withstand fire.

The result of using bricks which vary in size is the reduction of the amount of bond. For instance, facing bricks 5 courses to 1 ft. in height, backed with brickwork, built 4 courses to 1 ft. in height, give true bond every fifth course.

Question 4.—Describe three kinds of building stones you are acquainted with; the quarrying, dressing, and weathering qualities of each kind and the purpose for which each is best suited.

Answer.—Granite is a volcanic rock quarried by blasting; dressed by machinery and sometimes finished by hand. It consists principally of quartz, felspar, and mica, and when the stone decays the mica is at fault. Granite should not absorb more than 1 per cent. of its volume in water. It is quarried principally in the North of Scotland, Cornwall, and the Channel Islands, and in Norway. Granite is used where great strength and durability are required.

Aberdeen and Norwegian granites are considered the best, and the latter can be obtained in very large blocks. Norwegian granite has been used at Rosyth Naval Base.

Grey Cornish granite is also used for engineering works.

Guernsey granite is used largely for paving.

Limestone.—Limestones have as their principal constituent carbonate of lime, and many kinds contain varying, but small, quantities of silica, magnesia, iron, and clay. They are quarried by sawing and are largely dressed by machinery.

No limestone should absorb more than 17 per cent. of its volume in water. Granular limestones make first-class building stones for almost any position.

Principal Kinds.—Portland, Bath, Ketton, Ancaster, Ham Hill, etc. Marble and chalk are almost pure carbonate of lime, but are not granular in structure.

Sandstone have as their base silica, and are quarried by blasting and dressed by machinery and by hand. They are excellent building stones, work fairly easily, and weather well when laid on their natural bed. Comparatively few will withstand effectually the atmosphere of large manufacturing towns. Sandstones are used in the North of England and very extensively in Scotland, where the principal kinds are Corsehill and Corncockle from Dumfries, Giffnock stone quarried near Glasgow, and good stones are now obtained from the islands of Ailsa Craig and Arran. On the East Coast Arbroath stone is obtained and is almost entirely used for steps, templates, etc. Blackpasture stone from Northumberland is an excellent building stone now employed in important work.

Question 5.—What information would you require to specify the timber for an important public building, and how would you specify it in order to obtain the best quality of each kind, and what defects would you consider disqualified the timber when sent in?

Answer.—The local conditions, the position in the building, and the purpose for which it is intended.

Constructional Work.—Wood for carcasing or carpentry shall be sawn out of sound, bright square-edged Baltic or White Sea planks, deals and battens equal to "best middling" or pitch pine or Oregon pine of similar quality. All timber to be free from injurious open shakes, large, loose, or dead knots, or more than a small proportion of perfectly bright sap, and thoroughly seasoned. All sides to be sawn die-square with sharp angles.

All timber showing large open cup, star or heart shakes, or timber with Waney edges or excessively warped must be considered unsuitable for important work.

Finishings.—Oak to be English, grown in Suffolk or Monmouthshire—or to be Austrian Trieste or Hungarian Fiume oak. English oak is liable to split when used in joinery or panelling. Good oak has a hard, bright surface, and if the appearance is dull or the colour reddish the wood should be rejected.

Mahogany to be Honduras (or Spanish). The figure to be up to standard approved. If the wood twists or develops large shakes, or is particularly brittle, its use should not be allowed.

Teak for joinery to be best quality—Moulmein or Johore. Teak is subject to heart shakes, and if there are any signs of the attack of wood worm the wood should be rejected.

Pitch Pine to be American of approved figure and reasonably free from knots.

Pitch pine is liable to shrink, but the best kinds are of beautiful figure, and a small shrinkage cannot be considered a disqualification.

Excessive shrinkage and warping, heart and cup shakes are considered the usual disqualifications.

Question 6.—Describe the component parts of a good paint for exterior work and the proportions in which they are mixed and the purpose for which each material is used. To what extent are barytes, silica, or asbestine of value in paints?

Answer.—Paints are composed of "bases," "vehicles," "solvents," and "driers," but in finishing coats for outside work solvents, *i.e.*, spirits of turpentine are omitted, as they will not withstand exposure to the weather.

The usual "base" is white lead, a carbonate of the metal. It has great covering power and density and weathers well.

Vehicle.—The usual vehicle is linseed oil, and it is the best, as it combines with "bases" and "pigments" (colouring substances), enabling the paint to be laid on thinly and evenly. Linseed oil is obtained by crushing the seed of the flax plant and does not evaporate in drying. Boiled linseed oil, prepared from raw linseed oil by heating, is most suitable for outside work. It is darker and thicker and has much greater body than raw oil, dries more rapidly, and is more durable.

Driers.—The vehicle dries by absorbing oxygen, and this process is "speeded up" by the addition of substances called driers, which, by giving up their oxygen to the oil, or by enabling it to combine with the oxygen in the air, assist the drying of the vehicle. As many pigments retard the drying action of the oil, "driers" are still more necessary in coloured paints. Litharge (oxide of lead) is the usual substance employed.

Summing up, it may be said that the durability of the paint depends on the mixture of the "base" and the "vehicle," and that "driers" are added to accelerate the drying of the vehicle. "Pigments" are added to give the required colour.

The proportions of the constituents of paint for outside work vary according to conditions, but a common proportion is as follows for white paint:

15 lb. genuine white lead.
3 pints raw linseed oil.
2½ pints boiled linseed oil.
2 oz. driers—litharge.

When the colour is not to be white a reduction in the amount of raw oil and an increase in the amount of boiled oil should be made.

Barytes is very commonly added to white lead, and its presence is usually acknowledged. It is an adulterant, but if the quantity is small it is not a drawback, as it increases the opacity of the "base."

Silica is made a constituent of paint with the object of reducing the chemical action on metals and hardening the finished surface.

Silicate paints dry with a harder surface than ordinary paints, and do not as a rule blister under moderate heat.

Asbestine.—This substance is employed in asbestos paints and retards the action of fire.

Question 7.—Give a list of materials used in making the various kinds of fire-resisting partitions on the market and the defects of each kind.

Answer.—Teak, oak, and other hardwood partitions are considered fire-resisting when their thickness is not less than 2 in. If they are glazed the glass must be fire resisting, wired glass, copper deposit, or otherwise. Partitions of this nature are only useful in partitioning off parts of offices.

There are many kinds of concrete partitions on the market, and every patented system of reinforced concrete has its method of constructing partitions. When the partitions thus made form part of the structure great difficulty is experienced in forming openings in them. Thin reinforced concrete partitions transmit sound readily.

Concrete slab keyed partitions of various kinds are largely used often as thin as 2 in. Breeze concrete slabs are useful, as they permit of nailing and can be cut to fit any position and built in any part of a building. Slab partitions, consisting largely of chalk and fibre cemented together, permit of openings being cut by sawing. They do not, as a rule, hold nails sufficiently well. None of these partitions is sound proof.

Hollow brick partitions are becoming popular; they are easily and quickly built and are highly fire-resisting.

Generally speaking, the great defect of all thin fire-resisting partitions is the rapid transmission of sound with insufficient reduction of intensity.

OTHER PEOPLE'S OPINIONS.

Novelty in Design.

It is spurious novelty that offends. To take a Classic capital and turn volutes upside down and make a medley of old-time arrangement may be a feat of architectural jugglery, but it pleases no one; it interests no one. If it does not ultimately disgust the author of the abortion he must be far gone indeed to the bad. The details of contemporary architecture may be an exact reproduction of precedent; maybe precedent modified by intelligent study—honest endeavour to fit the part to its new purpose; a remembrance reproducing that which we have seen somewhere, gleaned from the tablets of memory. Or it may be a parody, or the mere product of a brain striving to produce beauty—and not novelty—for its own sake, and that without definite reference to precedent or tradition. These several methods may intermesh and overlap, but if classification may thus seem hopeless, there is yet always, on the one hand, the result of thought and endeavour, and, on the other, that which we need not trouble even to designate.—Mr. Thomas S. Richardson on "Novelty in Design" in *Architecture* (U.S.A.).

Straight v. Curved Roads.

There are those who advocate that all roads should be straight and others who wish them all to be curved; but whether the matter is looked at from the point of view of utility or beauty, I cannot see any valid reason why we should not joyfully accept both types of road; the important consideration is rather to use each where it best fits those conditions of site and traffic, and to develop in each the particular beauties characteristic of it. Why you should make an awkward acute-angled road junction to avoid curving a secondary street, so that it may have a normal junction with a more important one, or why you should make a stream of vehicles go down hill and up again to get from one point to another to avoid making a slight detour which would give a level road, I cannot conceive. Certainly the straight road is the most direct and obvious means of getting from one point to another when the site is level and nothing intervenes. On the other hand, the straight street is the most difficult to adapt to undulating ground, without resulting in steep gradients for traffic, expensive sites, and a ragged sky-line for the building, due to the varying levels. The dignity and beauty of the straight street as an approach to some adequate terminal feature will be generally recognised; while, on the other hand, the interminable straight vanishing lines of perspective developed in formal straight streets, if unduly prolonged, are anything but beautiful. . . . Façades when seen at too acute an angle cease be interesting; if parts of these can be back, bringing into view the side elevat of buildings more nearly square with line of vision of the beholder, it is poss to add very greatly to the beauty of str which lack an adequate terminal.— Raymond Unwin on "Roads and Stree in *The Town Planning Review.*

Raphael as Garden Architect.

Raphael himself, without doubt, signed the gardens of Villa Madama. this we have certain proof in a drawing his own hand in the Uffizi (No. 13 Here, lightly sketched after his man are the outlines of the extensive gard which he planned on the north-east of house, where the ground falls towards Tiber and Ponte Rolle. We see how c fully he adapted his design to the confi ration of the hillside by placing gardens at three different levels. Firs all, from the terrace, in front of the faça a double flight of steps led down t square garden laid out in flower-beds divided by pergolas, meeting in a cen pavilion. From this parterre ano broad stairway led to a round gar adorned with loggias and clumps of presses, while the third and largest gar shaped in the form of a circus, lay in hollow of the valley. This lowest gar could be used as an arena for games bull-fights, and contained an oval piec water evidently initiated from the obl basin excavated in the trifa at the Po at Hadrian's Villa. From the slight i cations given in Raphael's sketch, pupils filled up the plans and produ designs in which the temples, logg stairways, fountains, and groves are cle marked, and the names of the tre oranges, beeches, and chestnuts— written.—Mrs. Ady on "Roman Garden the Renaissance" in the *Ninete Century.*

Philibert de l'Orme and Inigo Jone

As an original constructor, De L'O was in the very front rank of his time an architect he occupies a diffe position. He was too much entangle details, starting with no clear conceptio architecture as an art and apt to think its complete æsthetic purpose was sati by the minutiæ of highly elabor design. His art was never spontane never the result of a full and living im nation. It smelt of the lamp—even of shovel of the gravedigger. Yet architec itself is such a complex art that a powe brain and a resolute will may go far, with moderate artistic endowments. he thoroughly knew his business there be no doubt, and a plan such as tha the Tuileries is a remarkable instanc this ability. The Tuileries was the of the great modern palaces of Eur and when, some fifty years later, I Jones was called upon to design the pa of Whitehall he did not hesitate to fo De L'Orme's plan in its general lines. elevations are another matter. I Jones, an architect of fine genius, right away from his model; and it wa this point, in the realisation of a fine i that De L'Orme failed, through wan imagination, through his inability to the wood for the trees. De L'Orme hardly a great artist, but he played important part in the development French architecture, and a perennial i rest attaches to his strong and unusual sonality.—Mr. Reginald Blomfield in History of French Architecture, 1 1661."

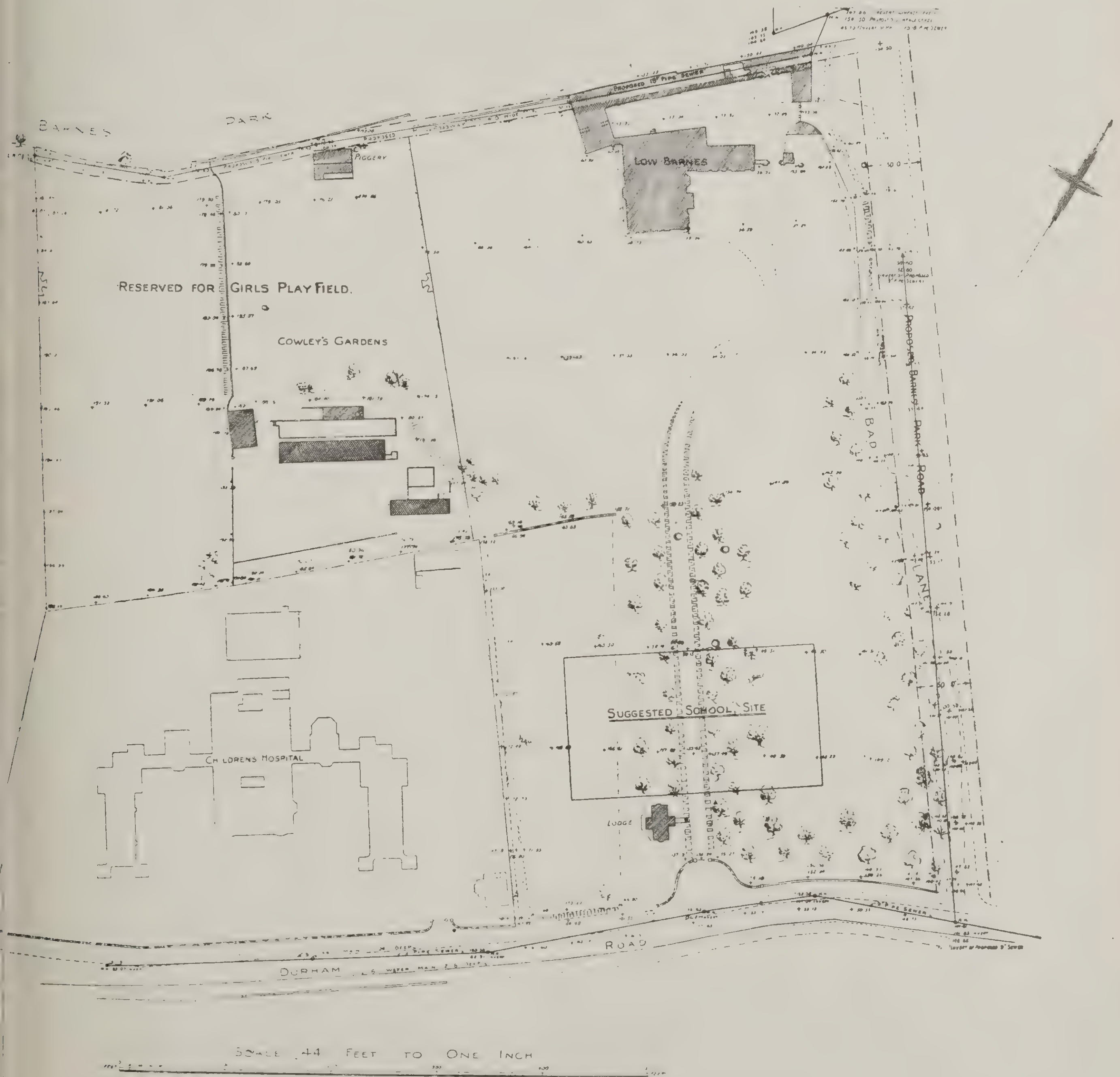
COMPETITIONS.

Secondary School, Sunderland.

ıe following is a summary of the con-
ns of the above competition: Designs
invited for a school to accommodate
oys at a total cost not exceeding £45
scholar, but buildings for 450 boys
are to be proceeded with in the first
nce. An assessor will be appointed by
resident of the R.I.B.A. Premiums
00, £50, and £25 are offered for the
ns placed respectively 1st, 2nd, and
Author of premiated design will be
inted architect, when his premiums
nerge in the commission. Accommo-
n: Class Rooms, at present: eight for
boys, four for twenty-five boys, four
venty boys, two for fifteen boys—total
And for future extension: two for
boys, two for twenty-five boys, two
orty boys—total 190. Also assembly
cloak-rooms, etc.; two physics labo-
ies, each for thirty boys; two chemi-
laboratories, each for thirty boys;
cs lecture room, chemical lecture
room, two manual instruction rooms, (metal work and wood work), each for thirty boys; a room between the manual instruction rooms, two art rooms (elementary and advanced), each for thirty boys; music room, gymnasium, library, boys' common room, dining-room for fifty boys, capable of conversion into a room for school society meetings; kitchen, storeroom for tables, etc.; two geography rooms, each for thirty boys; change room with lockers, store cupboards, etc., bicycle sheds for eighty to 100 machines, head master's room, masters' common room, clerk's room, waiting room, a caretaker's house, to be provided at an estimated cost of £500, a special allowance being made for this building. Competitors are particularly required to note that a portion of the site at the north-west end of ground, containing about 3½ acres, is reserved for a playing field for girls; also that the proposed 50-ft. street on east boundary of site may not necessarily be formed and constructed and sewered until after erection of school. Drawings to be to a scale of 8 ft. to 1 in. Plans of each floor, longitudinal and cross-sections, and elevations of each front, and a block plan. Perspective views not to be submitted. Dimensions and area of each room to be figured in feet and inches in plain black figures. A concise written description of the building to be provided, with a general specification and an estimate of cost. The sum of £45 per scholar is to include ventilation, lighting, heating, and architect's commission, but to exclude school furniture, demolition of existing buildings, levelling of site, and preparing ground for school games, caretaker's house, quantity surveyor's commission, and clerk of works' salary. Drawings to be sent in by Tuesday, June 23, 1914, and to be addressed to the Borough Engineer, Town Hall, Sunderland.

L.C.C. Schools, Battersea and Greenwich.

The London County Council has issued the official invitation to architects to submit designs for new public elementary schools at (1) Linda Street, York Road, Battersea; and (2) Billingsgate Street, Church Street, Greenwich. As we



SUNDERLAND SECONDARY SCHOOL COMPETITION: SITE PLAN.

announced some weeks ago, Mr. John W. Simpson, F.R.I.B.A., will act as assessor. Particulars may be obtained upon application to the Education Officer, Education Offices, Victoria Embankment, W.C. Designs are to be delivered by September 7.

Tramway Shelter and Convenience, Glasgow.

Designs are invited for a tramway shelter and convenience by the Tramways Committee of Glasgow Corporation. Particulars may be obtained on application to the general manager.

Council Chambers. Gourock.

Gourock Town Council are shortly to invite competitive plans for new Council chambers.

Halegrove Gardens School Competition, Mill Hill.

Members of the Society of Architects are requested not to take part in this competition, the conditions of which are not in accordance with those approved by the Society.

Hythe Concert Hall Competition.

Members and Licentiates are advised that the conditions of this competition are not in accordance with the Institute Regulations for Architectural Competitions, and the Competitions Committee are in correspondence with the promoters with a view to getting them amended.

OBITUARY.

Mr. J. T. Harrison, F.S.I.

The death has occurred at Buckingham of Mr. James Thomas Harrison, F.S.I., the well-known surveyor and estate agent, senior partner of the firm of Harrison and Sons. He was the author of a history of Buckingham.

Mr. Charles Wibley.

The death has occurred at Bath of Mr. Charles Wibley, a local contractor and master builder, who carried out a good deal of work both in England and Wales, and built many stations for the Midland and Somerset and Dorset Railway Companies. Mr. Wibley, who was over seventy years of age, was a member of the Bath Master Builders' Association.

THE R.I.B.A. PRESIDENCY: MR. ERNEST NEWTON NOMINATED.

We recently announced that it was the intention of the Council of the R.I.B.A. to nominate Mr. Reginald Blomfield, R.A., to serve as President for a third year. We regret to learn, however, that Mr. Blomfield, for reasons of health, has found it advisable to decline the nomination. An illness at the beginning of the year was followed by another at Easter, and this convinced him that if he continued to discharge the duties of the Presidency for a further session serious risk of breakdown would be involved. We sympathise sincerely with Mr. Blomfield, who has filled the Institute chair with great distinction. Mr. Ernest Newton, A.R.A., who is now nominated for election, was born in London in 1856, and was educated at a preparatory school at Blackheath, and afterwards at Uppingham. He served his articles with many other now eminent architects in the office of the late Mr. Norman Shaw, beginning practice on his own account about 1880. He was made an A.R.A. in 1911.

PROJECTED NEW WORKS.

Council Offices, Beith.

The Beith Parish Council have decided to erect new Council offices.

Winter Garden, Glasgow.

Glasgow Town Council propose to erect a winter garden in Kelvingrove Park.

Baths, Renfrew.

New baths are to be erected at Renfrew by the Renfrew Town Council at a cost of £6,000.

Parish Hall, Hornsey.

It is proposed to erect in the parish of St. Mary, Hornsey, a parish hall to cost about £3,500.

Technical Institute, Coventry.

Plans have been approved by Coventry Education Committee for the erection of a new technical institute at an estimated cost of £24,500.

Tidal Basin, Shieldhall.

A new tidal basin and other works in connection is to be constructed at Shieldhall by the Clyde Trustees at a cost of about £1,500,000.

Church, Barnoldswick.

A new church is to be erected at Barnoldswick. Towards the cost a sum of over a thousand pounds has been raised by the local residents.

Putney Bridge to be Widened.

Negotiations are taking place between the L.C.C. and the Wandsworth Council with the object of widening Putney Bridge.

Bathgate High Steward Memorial.

At a meeting of committee to decide what form the Bathgate High Steward Memorial should take it has been resolved to erect a granite column, 20 ft. in height, on a pedestal of four panels. Councillor M'Arthy, Edinburgh, has been appointed architect.

Schools, Tamworth.

A plot of land has been acquired, facing Ludgate and Moorgate, Tamworth, as the site for proposed new Roman Catholic schools. Plans are being prepared for the approval of the Board of Education.

Baths, Galashiels.

A swimming-bath and plunge-baths are to be erected at Galashiels from the designs of Mr. John Hall. The entire cost is being borne by Mr. A. Anderson Dickson, a local manufacturer.

Housing Scheme, Irlam.

The L.G.B. have sanctioned the scheme of the Irlam U.D.C. for the erection of 154 workmen's dwellings, and given their approval to a loan by the Council of £36,780 for the erection of houses and for street work.

Memorial, Taunton.

It is proposed to erect a memorial to the late Rev. Edward A. Duckett in the Church of Holy Trinity, Taunton, where he was vicar for over twenty years. Mr. Bligh Bond, who has been consulted, has advised the erection of a carved oak reredos above the high altar at a cost of about £200.

Buildings, Bedford.

Bedford Town Council have recommended the approval of the following plans: Motor house, Houghton Road, for the Bedford Engineering Co., additions to workshops, Queen's Engineering Works, for W. H. Allen, Son, and Co., Ltd.; cycle house, Beverley Crescent, for the Governors of the Harper Trust; lau and w.c.'s, Ashburnham Road, for committee of the Waifs and S Society; additions to workshops, Mary's Street, for Nicholls and stables, etc., Midland Road, for the ford Progressive and Industrial Co-o tive Society, Ltd.

Hospital Extension, Kirkcaldy.

Kirkcaldy Dean of Guild Court passed plans for additions to Kirk Hospital, including an additionl ward cular in shape, containing twenty bed operating theatre, and other rooms; o basement floor, heating chamber stores; and additional storey to admin tive block, consisting of servants' rooms.

Works, Romford.

Romford R.D.C. have approved th lowing plans: A bungalow in White Lane, Dagenham, for Mr. W. H. D six houses in Tenby Road, Cha Heath, for Messrs, Baskett and Brow house in Hall Lane, Upminster, for Griggs and Co., Ltd.; and a hou Gordon Road, Chadwell Heath, for M Ford.

Dundee Improvement Scheme.

Dundee's great improvement sche to be begun immediately. £40,000 been paid for the properties on whic new City Hall proper will stand, £150,000 will in all be spent on purch property and clearing the ground rig to the High Street. Sir James C gift of £100,000 is to be devoted t building of the block known as the Hall, including the lettable premises.

Church Tower, Llansamlet.

Designs for a new tower to be erect the Parish Church, Llansamlet, have approved by the committee of the I porated Church Building Society, an contract has been let to Mr. J. Ar Clydach. The tower, which will be in height, has been designed by Mr. dinning Moxham, F.R.I.B.A., arch Swansea.

Alterations at the Guildhall.

In the near future it is likely tha Court of Common Council of the Ci London will be invited to consid scheme for structural improvements a Guildhall. About two years ago the agreed, in principle, to sanction the c ing out of a large scheme for architec alterations, with special regard to portions overlooking Guildhall Yard is proposed that a start should at lea made with the improvement of the and the offices adjoining.

Library Extension, Derby.

Derby Town Council have passed for the extension of the free library an gallery to accommodate the Bemrose Devonshire collections of books, an two branch libraries. The provisio the latter, to be erected respectively o London Road Recreation Ground an the Normanton district, has been rend possible by a gift of £10,000 from the negie Trust.

Banks, Cardiff.

Two new banks are to be built at C for the National Provincial Bank of land, Ltd.—one in Cowbridge Road another in Queen Street. The arch for both is Mr. W. H. Dashwood C F.R.I.B.A., 2 Church Street, Cardiff, the contract for the Canton branch been let to Messrs. W. Symonds and Ltd., Cardiff. Certain selected Ca builders are now tendering for the Q Street Bank.

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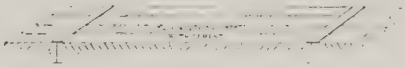

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ELECTRICAL NOTES.

London Electric Power Supply.

It will be remembered that a proposal was on foot last year for the amalgamation of the London electric supply companies. Quite recently this was dropped, for reasons best known to the companies themselves, but, probably, as everyone suspects, because they were not able to come to any agreement in regard to their several interests. In the meantime, the London County Council had asked Messrs. Merz and McLellan last year to draw up a report on the whole question as it affected the Council, to whom the electrical supply of London ultimately reverts by Act of Parliament in about twenty years. This report appears to have been received recently by the L.C.C. Special Committee on London Electricity Supply and is now issued. The compilers report on the present position, draw up a complete scheme for Greater London, and make definite suggestions in regard to the preliminary steps to be adopted.

It appears also that the various London companies have been giving the committee a great deal of useful information on their respective undertakings.

Systems of Generation.

The report arrives at certain valuable conclusions in regard to generation which are also rather startling. Assuming, for instance, that all the existing generating stations for the supply of light and power in the central area were in the hands of one authority, the report concludes that it would pay that authority to shut them down, sell most of the plant, and generate all the energy they produce in sites down the river. It is estimated that the saving in working costs which the existing undertakings could effect by obtaining their current from such a source would be not less than 18 per cent., or about £170,000 a year, after allowing for all capital charges on new machinery and mains. The initial outlay required for this purpose is estimated at between six and seven million pounds, allowing for increasing demand during the next four years. The question of supplying energy from stations on the coalfields is not considered advisable at the present stage. As an alternative, the question of supplying the domestic demand from ten model stations on the present sites is considered, and it is shown that this would cost, including capital charges, 20 per cent. more than from the river sites, and the policy of extending on the existing sites of ten best stations by rearranging and utilising the existing plant shows to still less advantage; for the extension of two or three existing river-site stations in order to save transmission would not present advantages, even on financial grounds.

Summary of Conclusions.

The authors conclude that the concentration of generating plant on sites down the river is the correct initial policy, both technically and commercially, deferring the question of generating energy at the coalfields or elsewhere until the load and the load factor have grown. They consider that, in order to carry out this policy with the minimum waste of capital, a high voltage three-phase primary distribution system of 50 cycles per second should be standardised for London as soon as
sible, and that a standard primary vol
should be adopted at once for all new
pressure mains. If electricity is to be
plied for general domestic use at
lowest possible price, it is also neces
both for reasons of economy and ot
that the existing low-pressure distrib
networks should not, as a rule,
extended, but be supplemented by a
three-phase network.

Finally, the report concludes that
most satisfactory and economical me
of achieving these results is the estab
ment of a new undertaking with
powers as will enable it gradually to
centrate production, standardise dist
tion, and bring about the amalgam
of all the various undertakings.

Central Control.

The second part of the report disc
the question of control. It does not
sider that a bulk-supply undertaking
longing either to a company or the L.
would, *per se*, be a suitable arrange
if competition were carried on with
existing undertakings. It proposes
ultimate amalgamation of all the Lo
undertakings—firstly, in regard to
ration; and, secondly, in regard to d
bution. No actual recommendatio
made as to how this should be effe
although various methods are discu
The suggestion is made, however, tha
L.C.C. should promote a Bill in the
session of Parliament to set up a ce
body with powers to establish the u
taking, to provide a bulk supply,
gradually to amalgamate the va
undertakings on commercial terms.

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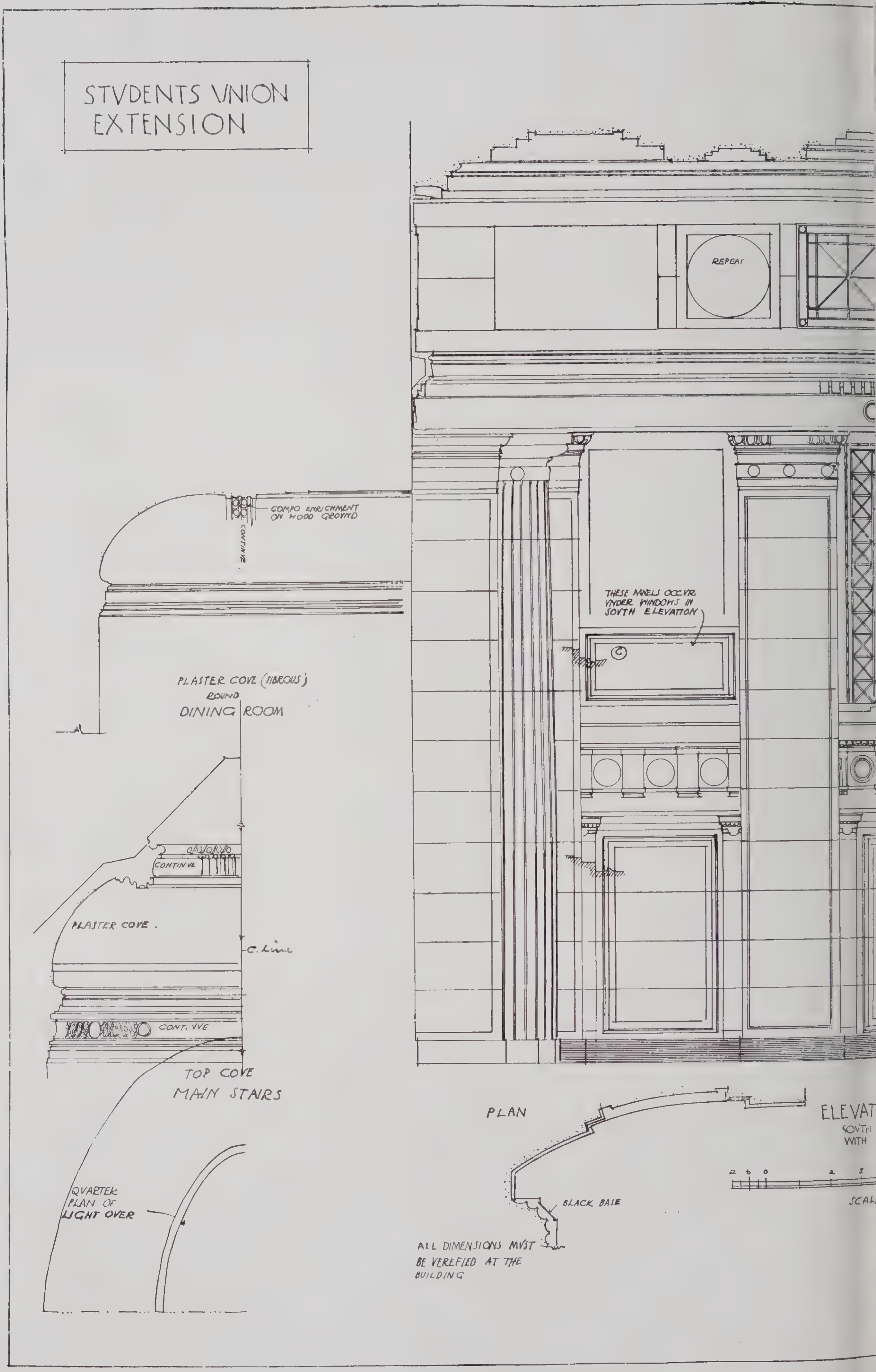
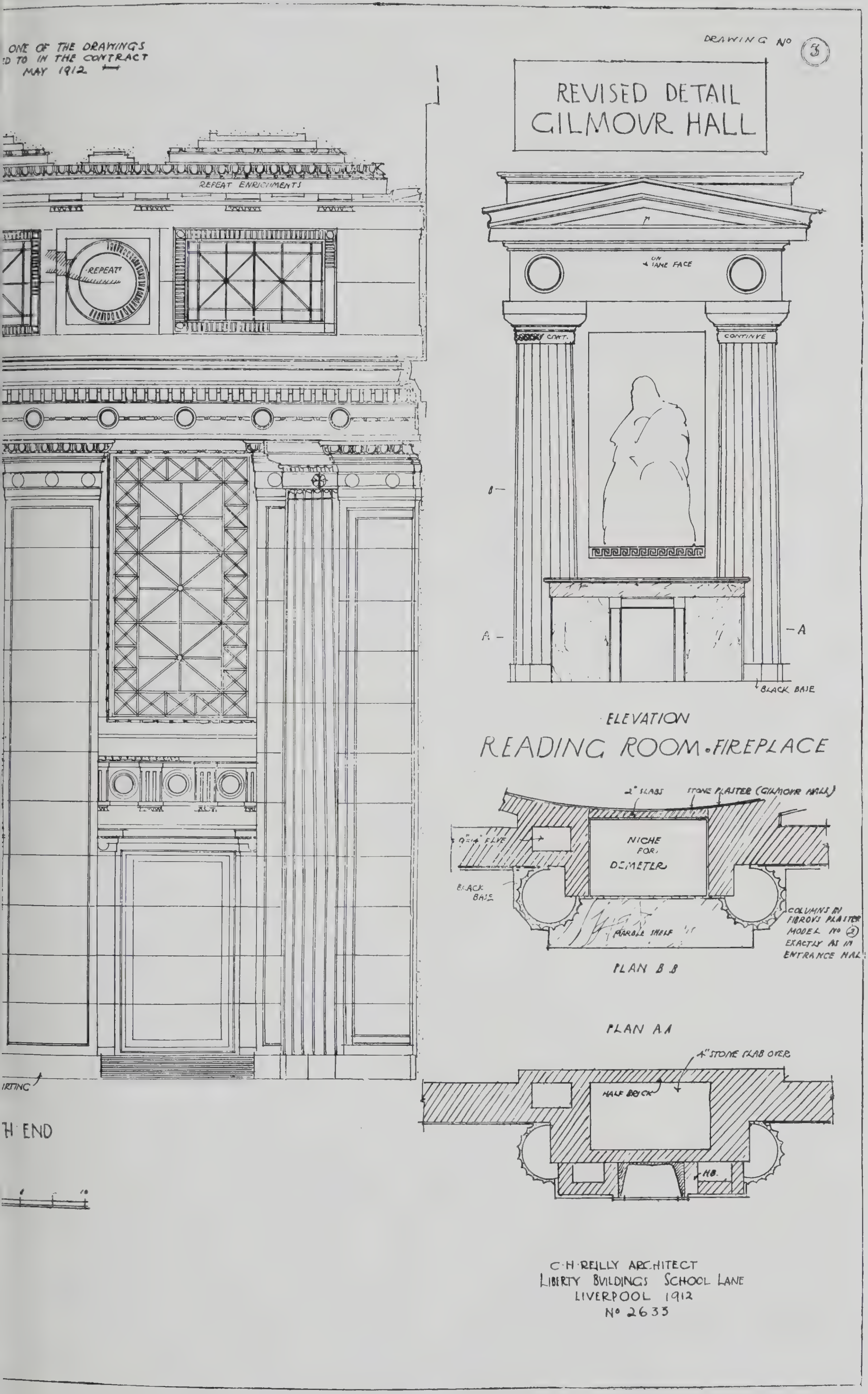
NEWPORT: 190, Commercial Road.
LEEDS: 6, White Horse St., Boar Lane
SWANSEA: 14, Heathfield Street.
CARDIFF: 4, Westgate Street.


STVDENTS VNION
EXTENSION
REPEAT
COMPO ENRICHMENT ON WOOD GROVND
CONTINVE
THESE PANELS OCCVR VNDER WINDOWS IN SOVTH ELEVATION
PLASTER COVE (FIBROUS) ROVND DINING ROOM
CONTINVE
PLASTER COVE.
C. Line
CONT. VVE
TOP COVE MAIN STAIRS
QVARTER PLAN OF LIGHT OVER
PLAN
BLACK BASE
ALL DIMENSIONS MVST BE VEREFIED AT THE BUILDING
ELEVAT
SOVTH
WITH
2 6 0 2 3
SCAL

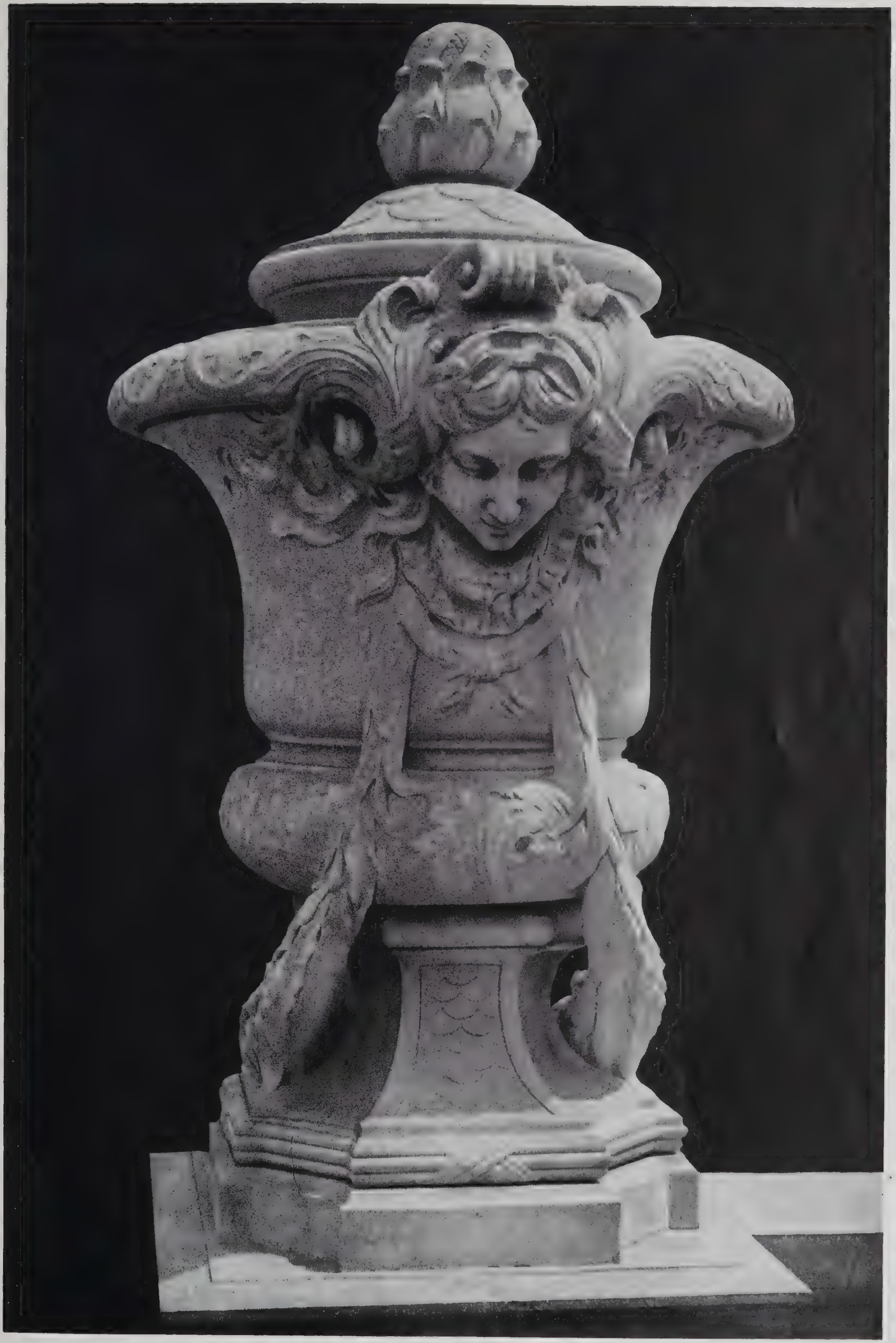
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XXI

PROFESSOR C H. RE



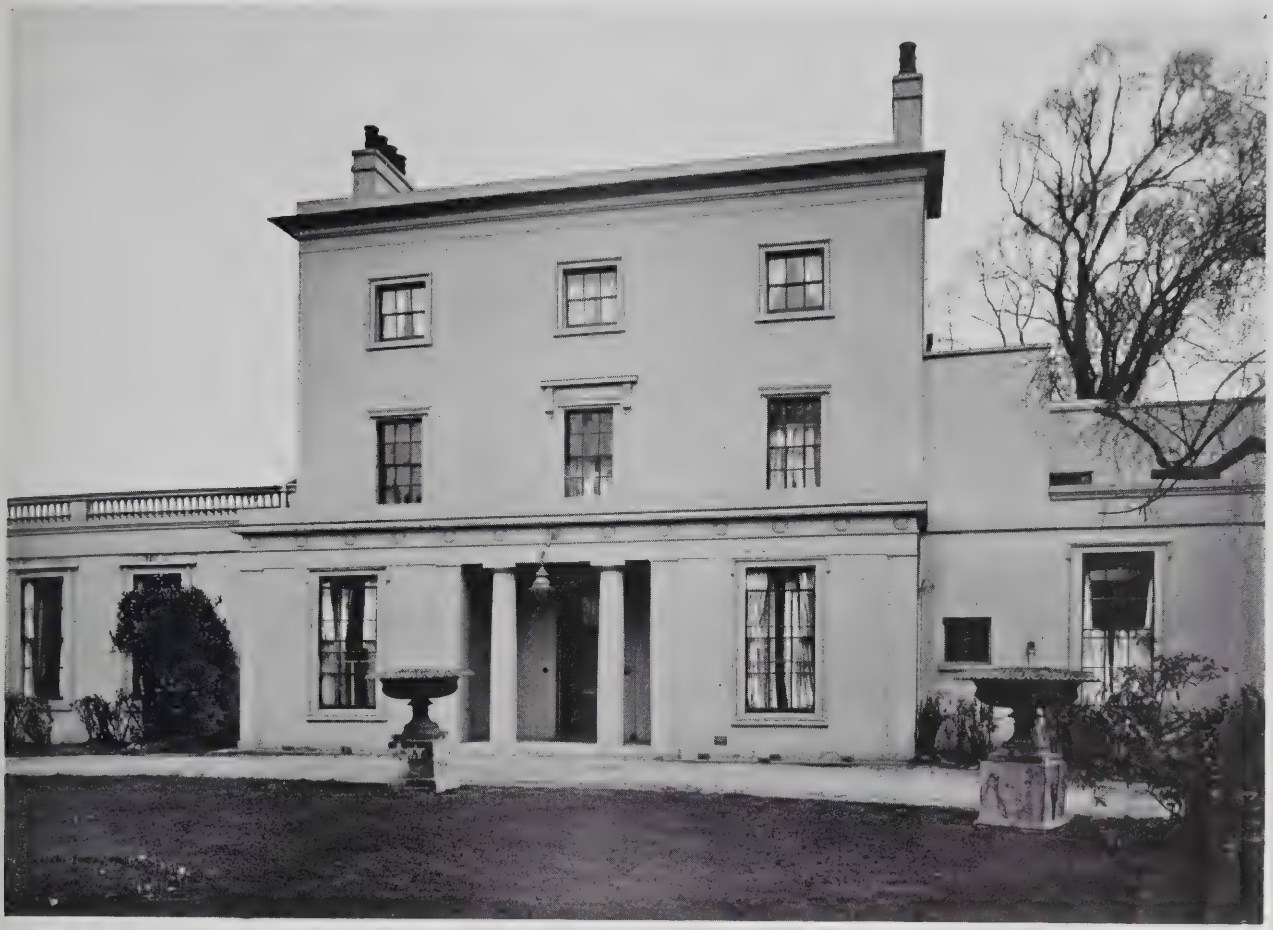
ALL, STUDENTS' UNION, LIVERPOOL: ELEVATION OF NORTH END, ETC.

B.A., ARCHITECT.

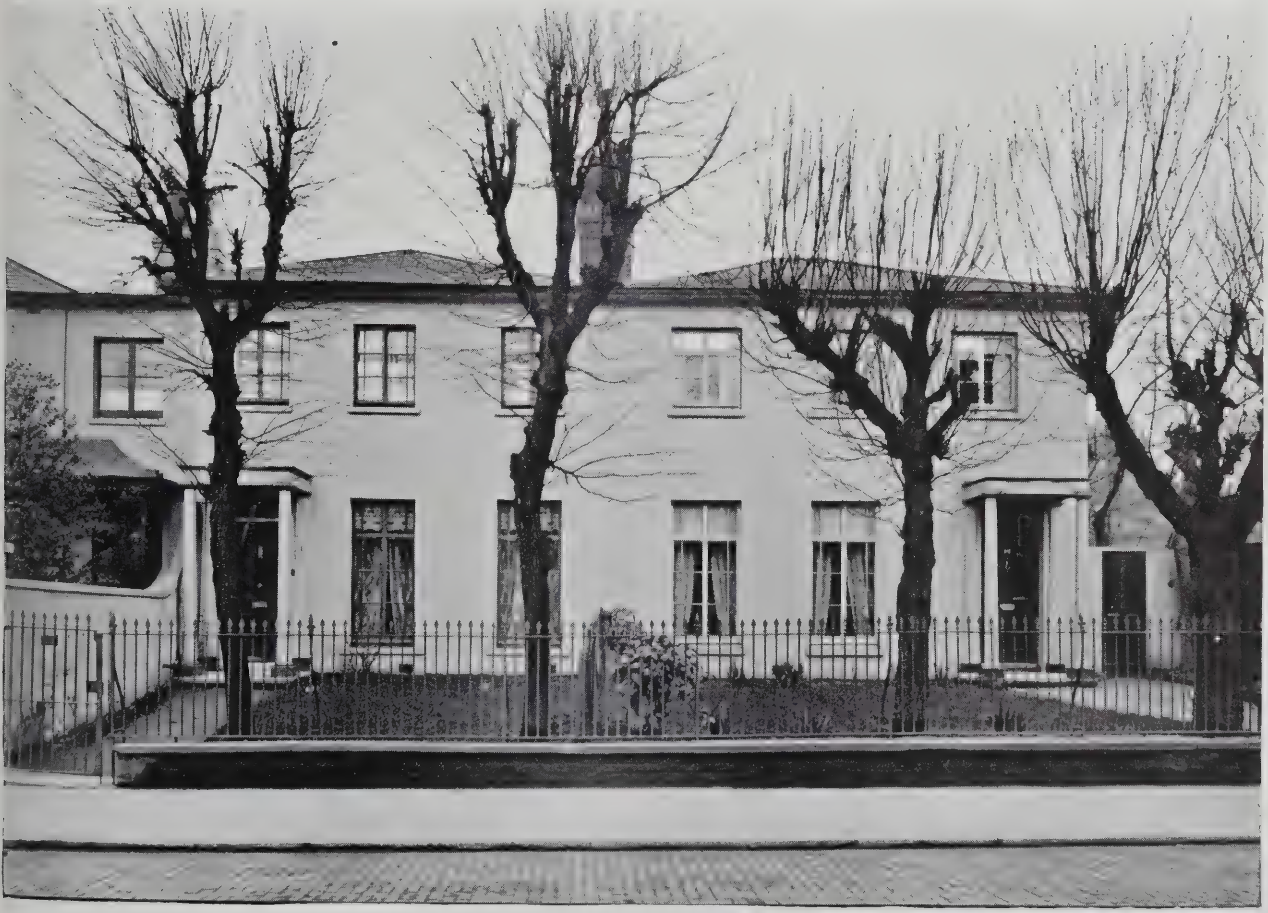


VASES. I.—MARBLE VASE ON PONT ALEXANDRE III., PARIS.

GARDET, SCULPTOR.

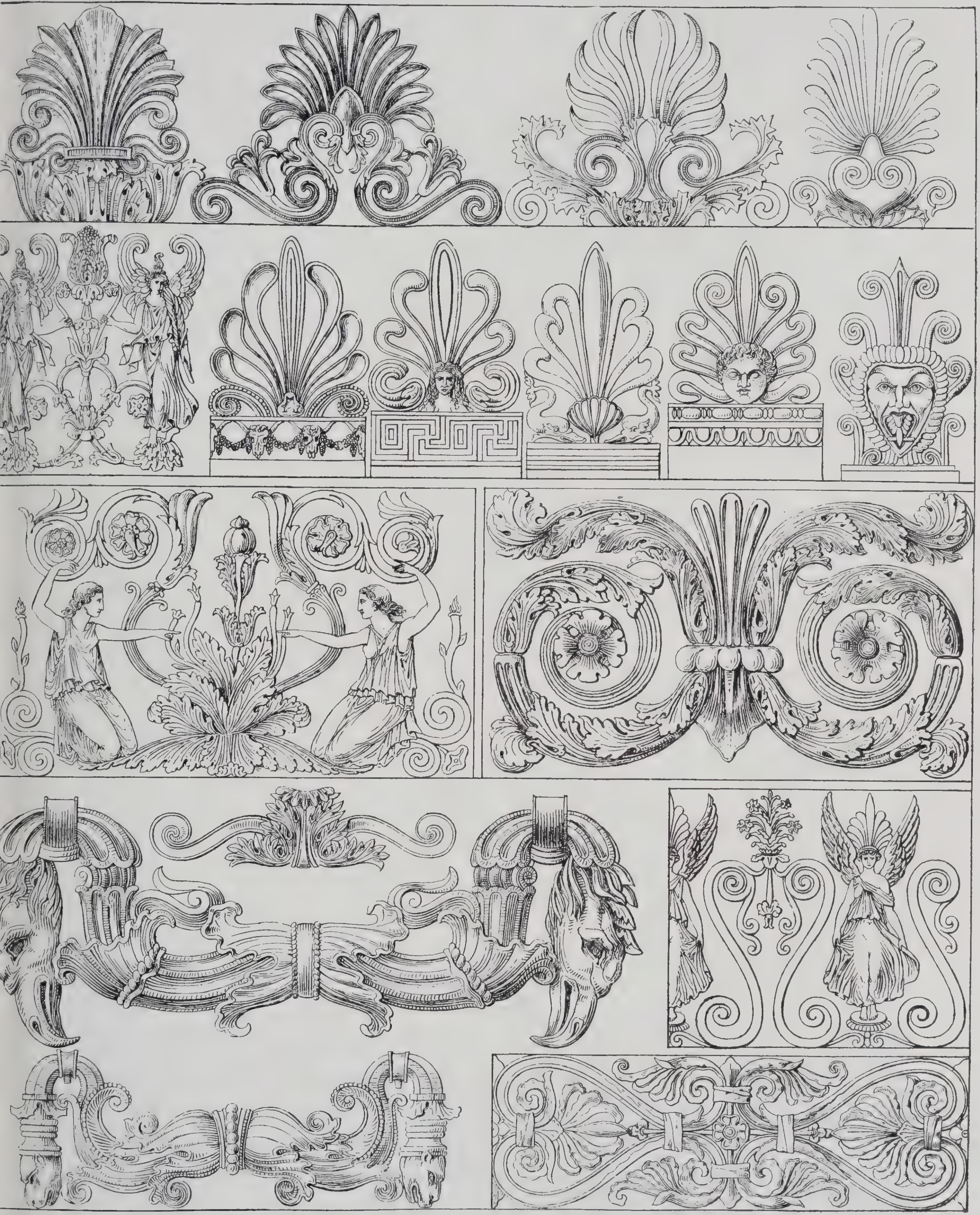


House at Herne Hill.

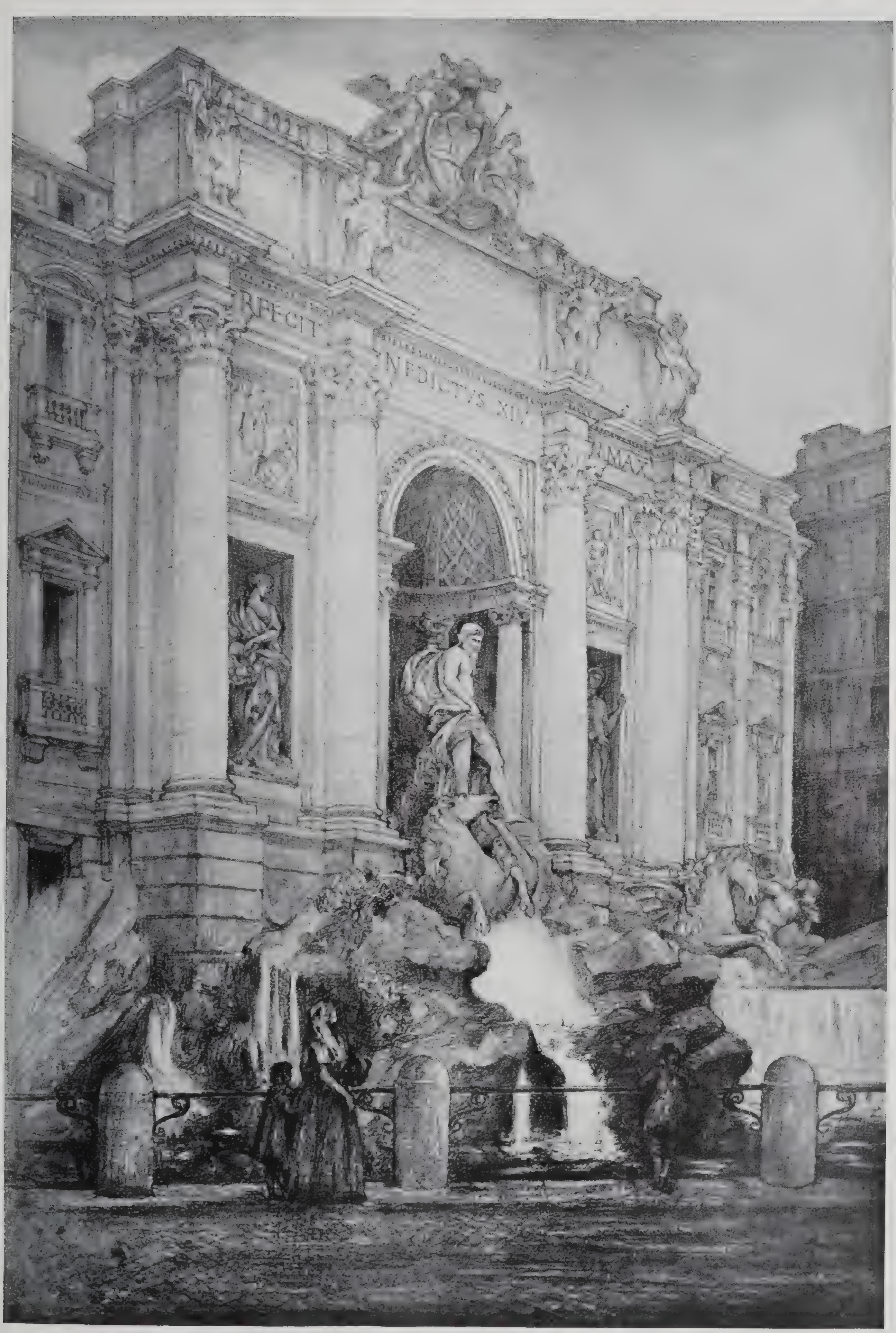


Pair of Houses in Water Lane, Brixton.

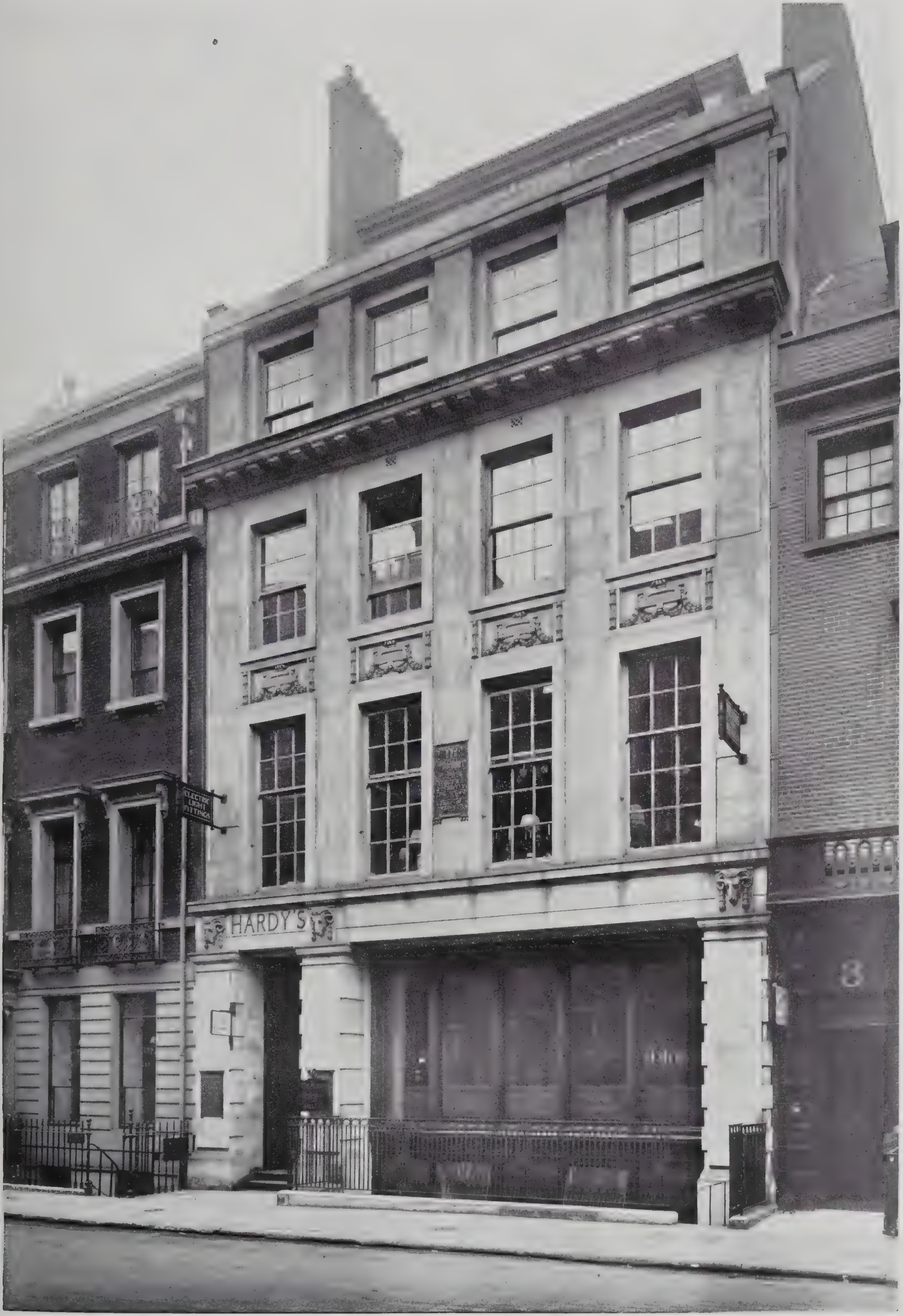
SMALL HOUSES OF THE LATE GEORGIAN PERIOD.—VI.



COTTINGHAM’S DESIGNS FOR IRONWORK. XII.—GREEK AND ROMAN ORNAMENTS.



STUDENTS' DRAWINGS. XVI.—FONTANA DI TREVI, ROME. BY E. F. LEWIS.
(Of the Massachusetts Institute of Technology.)



CURRENT ARCHITECTURE. LVII.—WAREHOUSE, 4, NEW BURLINGTON STREET, LONDON, W.

NIVEN AND WIGGLESWORTH, FF.R.I.B.A., ARCHITECTS.

FOR LOCAL AUTHORITIES’ SCHEMES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art. = The Articles of the Town Planning Procedure Regulations (Preparation of Schemes by L.A.s), 1914. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = A Local Authority’s Scheme under the Act of 1909. Owner = Owner within the Meaning of the Lands Clauses Acts. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets.

No. and Nature of Stage.	Resolutions of L.A	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 3. Preparation of Draft Scheme.	After L.G.B.’s Authority received Resolution to be passed by L.A. authorising Town Planning Committee to prepare a Scheme and to take the necessary proceedings set out in Arts. viii. and ix.	(*a*) Advertise L.G.B.’s Authority, L.A.’s arrangements for inspection of same, L.A.’s intention to prepare a Scheme, and that persons desiring to be heard should give notice to Clerk to L.A. within TWENTY-ONE DAYS. [Art. viii. (*a*) and (*c*)] (*b*) If any land excluded by L.G.B. serve notice of such fact upon Owners of such excluded Land, and any Council interested in such excluded land. Also upon C.C. if any main road affected by such exclusion. [Arts. viii. (*b*) and xxvii.] (*c*) Serve similar notice of exclusion of Land by L.G.B. where necessary upon (1) Board of Agriculture and Fisheries and (2) Commissioners of Works. [Arts. viii. (*b*) and xxvii.]	Conferences with Owners, Persons, Societies, and Councils interested to consider objections and representations. [Art. ix.]	As required by Officers concerned of L.A.	After L.G.B.’s authority to prepare a scheme received by L.A. make provision for free inspection of such authority with necessary explanations with regard thereto. [Art. viii. (*d*)]			

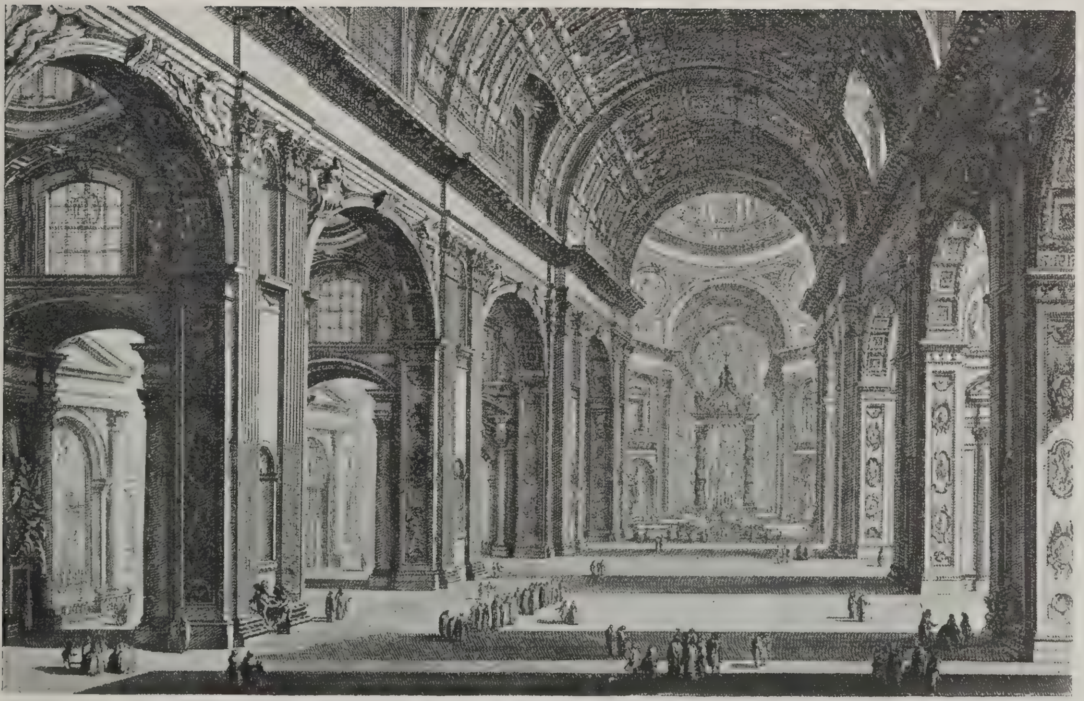
CHART OF TOWN PLANNING PROCEDURE FOR LOCAL AUTHORITIES’ SCHEMES—STAGE 3.

THE

ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, May 6, 1914. Volume XXXIX. No. 1009.

No. 83.



(From Piranesi.)

THE ARCHITECTS' & BUILDERS' JOURNAL.

MAY 6, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1009.

Architecture at the Royal Academy.

"THAT nearly all artists dislike and despise the Royal Academy is a matter of common knowledge." So wrote Mr. George Moore nearly twenty years ago, and a stroll to-day through the galleries of paintings on the way to the Architectural Room seems to bear evidence that the feeling is still alive. Either the painters who are artists dislike the institution too much to send their work, or, worse still, show their scorn by painting down to the general level of prettiness for which the Academy now stands. To us as architects this would be a serious matter were there no Architectural Room. Anything which lowers the general standard of taste in the community is disastrous to our art. But when we remember that the Royal Academy Exhibition, with shame to the Institute be it said, is the only exhibition in England at which architecture is shown, we can see that the Academy standards may have and do have a very direct influence for harm on our own work. The middle-class vice of prettiness in art, which the Academy fosters, is not confined to the painters and sculptors. It invades and pervades the Architectural Room. However sincere the architects may be who send their work to the Academy, they must pay their tribute to this prettiness. They must dress their wares in the current garb. They must employ one of the fashionable architectural draughtsmen, who will add the necessary flower-beds and sunsets. It matters not then, very much, what the building is like. Week-end villas and golf club houses, even summerhouses, and lych gates, all have an equal chance of being hung—indeed, a better chance of being hung than the most monumental buildings if these latter are shown as pure architecture. So it comes about that all alike, the builders of big things and the builders of little things, employ the perspective artist who can throw the necessary glamour over their work. There are, of course, one or two notable exceptions. There is Mr. Reginald Blomfield, who either sends his own line perspective or a workmanlike drawing from his office. There is Professor Beresford Pite, who exhibits a drawing of his fine insurance office in Euston Square, which shows that he has sufficient faith in his own detail to let it be clearly seen. Mr. Robert Atkinson does the same with the detail of his design for the Port of London building. But the Architectural Room considered as a whole is much more truly an exhibition of the water-colour work of Mr. Gascoigne, Mr. Walcot, Mr. Farey, and Mr. Horsnell than it is of architecture. These gentlemen each exhibit anything from six to a dozen drawings apiece, and very charming they are. Mr. Walcot excels in effects of sunlight, and Mr. Gascoigne in his trees. If you are doubtful of your detail Mr. Walcot will hide it in a blaze of light, Mr. Gascoigne in a shrubbery, and in either case you may be sure of a pretty picture. If you wish to see the value of a sunset and a foreground by Mr. Gascoigne, you should look at Sir Aston Webb's villa at Brooke, in the Isle of Wight (No. 1,909); if you wish to study the effects of dazzling sunlight and how it may obliterate the detail of a building, any of Mr. Walcot's drawings for M
Lutyens's or Mr. Baker's work at Delhi offer excell
examples.

These latter drawings, indeed, are the most seri
impeachment of the system. Here are represented
seven large frames the kernel of the most importa
building project of modern times. As architects
wish to study it minutely, both out of respect for t
men who have designed it and for the dignity of t
work. Instead of plans or geometrical projecti
which would tell us something definite, we have th
brilliant but hazy sketches. But they are the ch
exhibit of the year, and we must puzzle them out. I
us take Mr. Lutyens's four drawings first. They rep
sent the Government House. This is a long, low bui
ing—low for its length, at any rate—in plaster or wh
stone over a lofty brick plinth, and crowned with
curiously squat, egg-shaped dome. To the outline
this dome Mr. Lutyens has tried to give an Ind
character. The portico under it consists of twe
slender Corinthian columns, which are enclosed
double pylons of an extraordinarily massive ty
These pylons are repeated again as end features, w
more slender columns between them. The sudd
contrast of slender, graceful columns to the great m
of unarticulated material in the pylon is just one
those crude things in which Mr. Lutyens deligh
There is no doubt a certain forcefulness in such
method of design—a certain obvious appeal—but i
a forcefulness which is near the grotesque. The sa
thing is to be seen in the dome, with its heavy un
solved mass and its diminutive Saxon columns. T
other masses which rise above the roof, with the exc
tion of the two Wren-like towers, are treated in
same way. Tiny cupolas, like ventilators, contrast a
interpenetrate, in the manner of Sir Aston Web
tower and dome at South Kensington, with h
unrelieved masses of masonry. The detail, as far
Mr. Walcot permits us to see it, is neither Engl
Indian, Greek, nor Roman, but rather all four. Th
are the Wren towers, the Indian dome, the Ital
colonnade, and Trajan's column in the foreground.
is an impossible mixture which no genius could dig
In architecture, as in morals, East is East and Wes
West. Mr. Lutyens, with his fine lay-out and spacio
ness of effect, has made an heroic attempt to solve
impossible.

Mr. Baker's two balancing buildings for the Se
tariat departments, which are to stand on either sid
the avenue leading to Mr. Lutyens's Governm
House, are more consistent, but they attempt less.
domes follow more closely the usual Italian ty
though even here enormous elephants are used in
place of consoles to the attic storey, and bring
buildings dangerously near to Earl's Court. The sa
order is used as in the Government House, though
different but equally naïve way. Instead of contr
ing his columns with masses of masonry, Mr. Ba
groups them together in two porticos, which form
wings of his composition. Here he makes up for
restraint in other parts of the building by using th

singly or in pairs, but in masses of five! Such new
angements defy criticism.

Sir Aston Webb's most successful work is an addi-
n to the Junior United Service Club, Waterloo Place
o. 1,782). The character is well maintained, so
ch so that it is difficult to say which are the addi-
ns. His large detail (No. 1,990), well drawn by M
rey, of the entrance to the Imperial College o
ence and Technology, proves once more the impos-
ility of combining Classic and Gothic *motifs* in one
lding. His new library to Leys School, Cambridge
84), shown in an old-fashion line perspective, but
e the worse for that, is a further successful exercise
he same collegiate Gothic with which Sir Aston has
ady enriched Cambridge. Sir Ernest George is
resented by an Indian Palace, which, though the
spective is his own, does not do him justice. It is
ctly the kind of pretty perspective one would not
ect an architect to draw. Mr. Blomfield's work has
ady been mentioned. His design for Waldershare
k for the Earl of Guilford is, as one looks for from
Blomfield, masculine and unaffected. It is a
dly built-up piece of architecture very happily com-
ed, and it is shown by a set of geometrical drawings
thoroughly architectural manner. Messrs. Lan-
ster and Rickards are represented by detail draw-
s of the façade of their handsome new premises in
d Street for Messrs. Obach, and of an addition to a
se in Leicestershire. The former drawing, one of
clearest and most architectural in the room, is very
airly skied, especially when one notices the number-
pretty—pretty cottages which adorn the line.

t is stimulating and interesting to find that some of
best exhibits in the room are by comparatively
nown men. Mr. Harold Crane's workmen's hostel
ristol (1,841) is a fine, simple, massive building, with
ell-articulated ground storey and a good cornice.
s shown in a good drawing—quite in the Walcot
nner—by the architect himself. Messrs. Trehearne
Norman have two good exhibits, one drawn by Mr.
lcot and one by Mr. Gascoigne. The former is an
ressive mass of office buildings (1,788) for Kings-
, and the other premises at Millbank. This latter
restrained flat front, but not wanting in character.
m both Mr. Percy Worthington and Mr. Goodhart-
del refined and elegant work is always expected
former is well represented by a dignified stone
ssic house, Radbroke Hall, Cheshire (No. 1,881).
interesting to find to-day an architect and a client
dare to build a house with a real portico. The
position is good and simple and the proportion
sing; and in this case Mr. Walcot has wisely
wed the detail to be seen. Mr. Goodhart-Rendel
added a brave new wing, somewhat in Mr. Lut-
s's manner, shown in a Gascoigne drawing to Gably
k, Herefordshire (No. 1,910). His more cha-
eristic work, however, is his Eton Boys' Club, Hack-
Wick, also drawn by Mr. Gascoigne. This build-
has very distinct character and originality both
omposition and detail, yet is well in the English
ssic tradition. He proves, as do Messrs. Adshead
Ramsey, in their rows of small houses, for the
hy of Cornwall Estate at Kennington (No. 1,881),
it is possible, without any loss of domesticity, to
the dignity of Classic proportion and character to
e small houses. This is no mean achievement at a
when for this class of work Queen Anne,
bean, Early Georgian, and other immature styles
still considered the only alternatives. In their fine
itectural model of almshouses and small shops for
same estate, Messrs. Adshead and Ramsey prove
in the same thesis. Mr. Robert Atkinson has at
t three fine drawings of his own and his partner's
k. His drawing of a house at Lympne (1,864) is
aps the finest drawing in the exhibition; while
1,857, a house at Ealing, is, except for the gate
s, an admirable piece of detail work.

The ecclesiastical work—some of the best work in the exhibition—which from its nature is largely saved from the offence of prettiness, must be reserved for later notice.

It remains to point out that the finest piece of architecture shown by the finest architectural drawing is not in the Architectural Room at all. It is in the entrance hall, and consists of a large drawing of Mr. John Russell Pope's design for the Lincoln Memorial at Washington. It would be interesting to know why this is placed in the vestibule. Was it considered safer to leave the stranger at the gate? I think it was.

C. H. Reilly.

Academy Sculpture.

With the exception of Mr. Havard Thomas's fine bronze statue of Thyrsis—which, by the way, is so placed that one can only look at the front of it with comfort—there is nothing in this section of the Academy exhibits that is likely to arouse more than a very mild public excitement. Architecturally the interest of the sculptures is almost *nil*. Cheek by jowl with the ordinary array of busts are sundry memorials and bits of memorials that whisper of possibilities of a noble architectonic setting: Sir W. Goscombe John's figure-surrounded pedestal, for instance, to his Calcutta memorial; and there are one or two statues that suggest their *milieu* must be in an open space of a great city, with a not ignoble architectural background to set them off. But the public, as well as the art-lover, would like to know something more definite about the places where these statues or memorials are going to—what there will be in their immediate neighbourhood or just outside it, what the thing will look like *in situ*, what is its artistic value in relation to its surroundings. Academy sculpture never tells one this. It is careful even to avoid suggesting it. This of course is not its own fault, but that of a system which precludes the exhibition of sketch models of the complete works, or even of a plan of the architectural lay-out, or a perspective sketch. There is no room for such things in the sculpture section, say the authorities, with perhaps a touch of resentment at the idea of intruding architectural matters on the "art" of sculpture, even for the benefit of the latter: surely an argument for relegating sculpture to the winter exhibition, where it would have more space to display itself.

British Museum Extension.

To-morrow (Thursday, May 7) the King opens the new extension of the British Museum, said to be the largest of the many additions that have been made to the building, which was begun in 1823 by Sir Robert Smirke, who was assisted by his brother Sydney. It was not until 1855-7 that the reading-room, occupying the central quadrangle, was constructed in conformity with a plan proposed by Sir Antonio Panizzi, and carried out by Sydney Smirke; while the "White Wing" and a gallery for the Mausoleum Marbles were added in 1879. The present addition is part of a scheme for enclosing three sides—north, east, and west—of the Museum, and it presents to Montague Place (at the rear of the Museum) a façade of twenty Ionic columns, with two massive pylons, and is 380 ft. long, 50 ft. wide, and 80 ft. high; a central "neck" axial to the central reading-room connecting it with the main building. In planning the interior, the architect, Dr. J. J. Burnet, LL.D., R.S.A., F.R.I.B.A., took care to ascertain by personal inspection what had been done in the principal museums of America, and he has provided the British Museum with its first passenger-lift. Land and buildings are estimated to have cost more than a million sterling. The façade was illustrated in our issue of December

30, 1913, and interior views were shown in two plates appearing respectively in the issues of April 1 and April 22 of the present year.

Circulation Figures.

IN "Here and There" last week "Ubique," commenting on the circulation of architectural and building trade papers, said: "It would be interesting to have set out, attested by reputable accountants, the actual sale figures of this Journal and those of the 'Building News.' In a sporting spirit I should be willing to wager that this Journal has by far the larger circulation and is much the more widely read." We shall be very glad to adopt our contributor's suggestion, and will readily give our own sale figures if our contemporary will give theirs.

Postponed Hospitals.

THAT hospital and infirmary building is being held in suspense as a result of recent legislation may be inferred from an instance reported from Bath. It had been proposed by the Bath Guardians to build a hospital for 124 patients, but the motion was shelved on an amendment to the effect, "That in view of the special provisions under the Insurance Act for dealing with phthisical cases, and also in view of a larger extension of State medical relief in the future, the consideration of the building of a new hospital at the workhouse be deferred for twelve months." This "wait-and-see" attitude is becoming very prevalent, and seems to have paralysed Government action with regard to sanatoria. Until experience of the working of the Insurance Act provides more definite data with respect to the necessities of the case, and until the Government—the present Government or another—makes a clearer revelation of its intentions with regard to the provision of hospitals and sanatoria, local authorities, wanting such guidance, naturally hesitate to commit themselves to expenditure which, in the upshot, may turn out to have been misapplied. This, however, is a matter of urgent and vital public importance, and the local authorities should not rest content with merely marking time: that is simply to acquiesce in and confirm the bad old tradition of official dilatoriness. Even Government inertia has been known to yield to the determined pressure for which the present is a distinctly just occasion. Hospital building should not be postponed even to the exigencies of Ulster.

The Hospital Site Difficulty.

IT is sometimes possible to extend an almost equal measure of sympathy to both sides to a controversy, and an occasion of this kind is provided by the proposal to build a smallpox hospital at Sandy Beck Bar, near Waterford Ghyll, a delightful district in the Craven country, celebrated in Wordsworth's "White Doe of Rylstone," and otherwise associated with history and romance. Naturally enough, there has been a storm of protest, and we notice with particular interest that the petition against the scheme is said to include the signature of Mr. Ralph Knott, architect of the new London County Council Hall. In cases of this kind, the architects always vote for the preservation of amenities, even when that course involves the abandonment of a building project. In the present case there can be no question of abandonment. Skipton Rural District Council are under an obligation to build a smallpox hospital somewhere, and it is impossible not to feel sorry for the trouble and expense to which they, like many another local authority, have been put in their search for a site, Sandy Beck Bar being their third misadventure since 1908. The truth is that a hospital of any kind is nowhere welcomed by property-owners, whether or not they happen to be Wordsworthian lovers of picturesque scenery or of other forms of "the poetry of nature"; and hospitals for infectious diseases are quite explicably held in pecul
abhorrence. The misfortune is that they are necessar
but if they are properly designed they need
destroy the scenery, although at the best they can nev
be reasonably expected to enhance its romantic char

"To Town-plan."

IT was bound to come, sooner or later, the eleg
verb "to town plan." It has not come precis
in this form; but the infinitive is implied in t
questions that were put at a recent meeting of Linc
City Council. Mr. W. Baker asked, "If any member
the council held any land that was likely to be to
planned," and another member thereupon inquir
"Can you town plan until you have purchased
land?" Since pencil and paper are cheap, a
Ordnance maps can be had in sections, the answer
necessarily in the affirmative; but the point to obse
is the glibness with which the inquirers tacitly assum
the existence of the verb "to town plan." In
participial form, "town planning," the verb of cour
is almost contemporaneous with the idea, and so
the verbal substantive "town planner"; but while
Lincoln extensions come upon us as something o
shock, there is no real reason why the verb "to to
plan" should not be conjugated in all the moods a
tenses, if the process gives fair promise that tov
planning—the thing itself, not its verbal symbo
shall cease to be irregular and defective.

The Norwich Shirehall.

WE are glad to see that a writer in the "East
Daily Press" has been protesting against
battlements and toy turrets of the Shirehall
Norwich. This building is at present in process
renovation, its former stucco front having be
removed, and its other external embellishme
brightened up; but the old design has been retain
and the castellated features referred to are apparen
not to be tampered with. Perhaps, as the writer
ferred to asseverates, it is a good thing that the rat
shabby-looking stucco front has been abolished;
we are far from sharing his opinion of stucco in ge
ral, that "nothing could make it look other than mea
and in this particular case the removal of the stuc
seems an improvement hardly worth the making,
it is to stop at that. Why should the battlements
retained? They certainly do nothing to express
purpose of the building, which is, we believe, who
pacific. No sentiment need attach to their preser
tion, since, historically, they are of little interest. Th
belong, in short, to the category of architectural sha
and their removal from the design, which is at pres
unworthy of the fine site occupied by the Shireh
would surely merit no charge of vandalism.

Balconies for Sleepers.

THE demand for sleeping accommodation that sh
be in the open air, and yet form part of the str
ture of the house, has perplexed a good ma
architects anxious to please their clients, m
especially when the latter have given more or l
specific instructions as to the way in which the acco
modation is to be provided. The obvious method
indulging the fresh-air craze without disfiguring
outside of one's house is, of course, to provide ones
with bedroom windows of such a size and in such po
tions that, when they are open, one is practically s
rounded by the desired outside air; but there ex
otherwise reasonable people who will have balcon
and nothing but balconies. The air, they maintain,
a bedroom provided with these windows is not so fre
as that outside; moreover, the "comfort" of the ro
is interfered with—by which, of course, they mean
conventions of bedroom comfort. In these cases
architect has to choose between offending the clie

injuring his own artistic reputation, since it is us that a projecting balcony that would accommo- say, a three-foot bed is an impossible feature for dinary domestic façade, back or front. In short, nly way of meeting the difficulty is by evading it manner suggested above; and even that way, in ase particularly of an elderly house, is often diffi- enough.

The London Labour Trouble.

NY hope that the proposals of the National Federation Conciliation Board for the settlement of the ruinously protracted dispute in the lon building trade would be accepted by both was rudely dispelled when, last Thursday, the t of the workmen's ballot was published. Such an vhelming majority as 23,481 to 2,021 is significant mething that is seriously objectionable from the of view of men who, after suffering about thirteen s of semi-starvation, were not likely to be over- lious about the conditions upon which they might lowed to return to work. Unfortunately the main anding point in dispute is one upon which com- ise seems extremely difficult; for the more stress asters lay upon their undoubted right to employ nionists, the more obstinately the unionists se that right; yet in mutual concession seems to e only way out of the trouble. Hence the dead-

Clifford's Inn.

e putting-up to auction of Clifford's Inn portends ts early demolition, as well may be, seeing how trong must be the temptation to erect large office ings on so valuable a site, London will lose one very few remaining specimens of old non-ecclesi- l Gothic. Otherwise, there is no great reason to our for its preservation. Certainly it has no y that we should desire it, and beyond the fact Sir Edward Coke and John Selden—he of the witty, and sometimes rather risky "Table Talk" re at different periods members of it, and that, the Great Fire of 1666, Sir Matthew Hale held in court of arbitration upon the claims or disputes g from the fire, the inn has no historical associa- that might justify a fuss. It contains, however, quaint old armorial glass which will doubtless be sly preserved, whether or not the building is lished.

An American Church for Kingsway.

E cannot say whether the proposal to erect an American church, club, and institute in Kingsway, as a memorial of the century of peace en the two nations, is likely to mature; if it does e design will presumably be entrusted to an ican architect. We are not aspersing the capa- s of British architects in expressing the hope that latter will be the case; it is simply that in a ughfare like Kingsway, which is still in the ng, it would be very good for us to have a good ple of the American treatment of public build- if only for its educational value to committees business men. The patronage of architecture, c and private, in the States is of a larger, more ous nature, than ours, and probably on this nt the feeling for the monumental among their tects has developed beyond a point that we have et reached. They both breathe a freer air, and ore courageous in adopting and adapting the architectural traditions. We fancy that Mr. nigle, Mr. Lowell, or Messrs. McKim, Mead, and e might easily design something that would act as siderable stimulus to the architectural develop- of Kingsway, without introducing any sort of dis- ncy into the scheme of the thoroughfare.

A South Kensington Site.

SOME speculation is rife as to what will be done with the triangular site at the junction of Exhibition and Cromwell Roads, South Kensington, which the Government has recently purchased. At present the site is occupied by a block of seven houses of a type that has gone out of fashion; they are quaint late Victorian buildings, having little relationship to the domestic needs of to-day; one of them is occupied by the Board of Works, but the rest are barricaded up. The assumption is that they will be pulled down to make room for a public building of some description—but what? Exhibition Road is virtually composed of public buildings completed or in progress, all of an educational character; what, then, can remain for Sir Aston Webb to do?

THE PLATES.

OUR Plates this week are widely diversified in interest, but we would draw special attention to the example of Current Architecture we publish (the *Florence Nightingale Memorial*, at Liverpool) and to the singularly fascinating specimen of late Georgian domestic architecture (see Special Notes below). *The Great Hall, Euston Station*, which we give as an example of Monumental Classic Architecture in the Nineteenth Century, is too well known to need much description or comment. We are reminded, however, by Mr. Richardson, whose book we review elsewhere in this issue, that the Hall was built by Hardwick and his son in 1847. The design is a splendid piece of borrowing, by the way, being founded upon Peruzzi's great chamber in the Massimi Palace. Our plate is from a photograph very kindly lent us by Mr. Batsford. We continue our series of *Cottingham's Designs for Ironwork* with *Antique Roman Ornaments and Candelabra*, and No. 2 of our new series of Vases is another *Marble Vase on Pont Alexandre III., Paris*, characterised by the tenderness of feeling and graceful flow of line observable in the example given last week. The fourth stage of our *Chart of Planning Procedure for Local Authorities' Schemes* constitutes our sixth plate; and the double plate is a fine drawing, *Detail of Main Entrance, Palais de Justice, Brussels*, of Poelaert's masterpiece.

SPECIAL NOTES.

Florence Nightingale Memorial, Liverpool, Willinck and Thicknesse, FF.R.I.B.A., Architects. This work is constructed of Hopton Wood stone (supplied and worked by Messrs. J. Stubbs and Sons, Liverpool), the sculptured panel being of Pentelican marble. The sculpture is the work of Mr. C. J. Allen, of Liverpool. The monument was erected by private subscription promoted by the present Lord Mayor of Liverpool.

"Woodbine Cottage," Petersham, Surrey. This was probably built some time between 1780 and 1790. The door, however, is designed in an earlier manner, and is probably an old door from an earlier building, which has been re-used. The balls at either side of the entrance are out of scale, and this somewhat mars the general effect.

PHOTOGRAPHS AND DRAWINGS OF GEORGIAN WORK WANTED.

THE EDITOR will be pleased to hear from readers who have photographs suitable for inclusion in the series of plates entitled "Smaller Houses of the Late Georgian Period," and measured drawings of Georgian interior decoration; especially drawings of the examples of such work—chimneypieces, panelling, doorways, etc.—which are included in the collection at the Victoria and Albert Museum, South Kensington. Payment would be made for suitable material.

MONUMENTAL CLASSIC ARCHITECTURE.*

WHAT a pity it is that this book was not written thirty years ago! It might have saved us from so much immature and eccentric architecture. It might have saved England from the architecture of those men of whom in polite obituary notices it is said that, though nurtured in the traditions of the Gothic Revival, they succeeded, when well past middle age, "in feeling their way" towards Classicism. It has been a painful process, this "feeling their way," and it has generally taken the form of scattering over the country (and worse still, over the towns) Tudor mansions with tall chimneys, quaint Jacobean houses, and semi-demi-Georgian buildings. The respected authors of such would have been more highly respected still if they had only had the privilege of reading Mr. Richardson's book, and had been able to put into practice the principles inculcated therein.

The present volume on monumental architecture will come as a surprise to those (and they are still very numerous) who imagine that shortly after the time of Wren the Classic tradition in England ceased altogether. Mr. Richardson tells us that "From the time when Inigo Jones erected the Banqueting Hall until within recent years the monumental manner has been demonstrated continuously. We have observed the progress through many changes, from the period when it displaced the last flicker of mediævalism, through the courtly age of the eighteenth century and the commercial epoch of the nineteenth, until the chaotic
uncertainties of the present age stand out in ill-defi
contrast with the principles of Hellenism."

Mr. Richardson has little to say about Eng
Renaissance Architecture (this subject has b
exhaustively dealt with by Mr. Blomfield), but confi
himself to those later developments which sprang fr
an increased knowledge of the remains of antiqu
He divides his period into four phases—the Rom
Palladian, the Græco-Roman, the Greek, and las
the final culmination in the Neo-Grec and Ital
phase. This classification, unlike the arbitrary o
which disfigure so many of our histories, is of gr
value, for it corresponds to a real difference of mann

The first of these phases, dated roughly 1730-17
was largely due to the activities of Richard Bo
Earl of Burlington and Cork, and was distinguis
for many buildings of the first rank, of which the b
known is, of course, Somerset House. This has ne
been adequately dealt with before, and
Richardson's masterly criticism of the work
Chambers is one of the most valuable parts of
book. Less familiar to the majority of architects
the Parliament House, Dublin, by Richard Cassells
Robert Parke, and the magnificent Customs-house
the Exchange in the same city by James Gandon.
Richardson has some interesting things to say on
subject of Newgate prison. "Forbidding and gloo
in the extreme it certainly is, but far removed from
taint of the merely mechanical. Its gigantic mas
rendered more sombre by the working of the mater
symbolised the awful majesty of the place; the r
grandeur of the external aspect hinted mystically
the scenes within. The prominence given to

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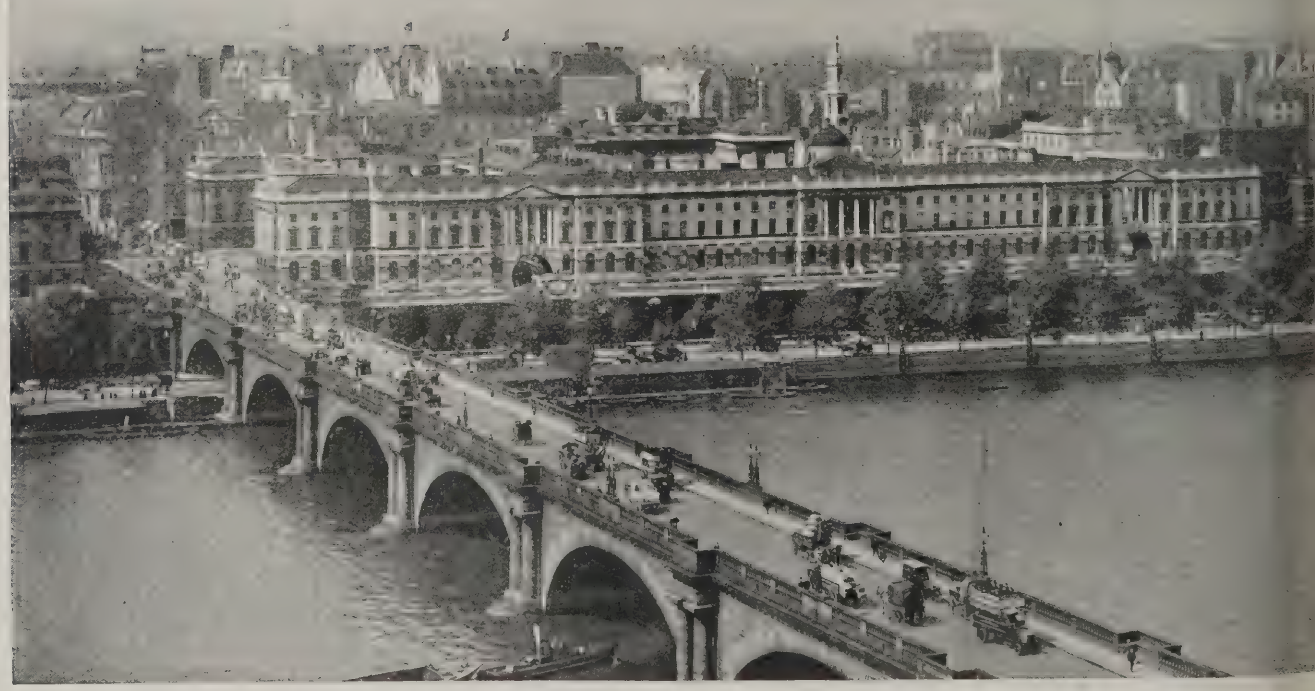
*"Monumental Classic Architecture in Great Britain and Ireland during the Eighteenth and Nineteenth Centuries." By A. E. Richardson, F.R.I.B.A. Illustrated in a series of photographs specially taken by E. Dockree, and Measured Drawings of the more important Neo-Classic Buildings, with descriptive text. London: B. T. Batsford, Ltd., 94, High Holborn.



SOMERSET HOUSE AND WATERLOO BRIDGE, SHOWING GENERAL COMPOSITION.
(From Richardson's "Monumental Classic Architecture.")

rnor's house in the centre of the principal front been the cause of much criticism which further ysis of the design may help to clear away. That ce risked such a contrast in placing a building of estic character in the midst of a fortress structure ficient proof of his confidence in his own powers; he succeeded is unquestionable. In the first nce he resolved the composition into three main ps, namely, two balancing wings linked by a sed centre, in itself a simple grouping. Having ined a strong contrast in the arrangement of ary masses, he proceeded to deal with the entrance es and the governor's house, intending the latter subordinate grouping to fill the recessed space. his procedure, in rightly placing a submotif, he led one of the chief laws of academic design." ions will always differ upon the subject of New- prison. Dance exhibited great cleverness in posing the two lodges between the governor's e and the solid wings of the prison, so that the e itself, although seeming frail in comparison with blank façades on either side, does not give the arance of being crushed. The effect of the whole, ever, in the Geometrical Elevation which Mr. ardson shows, is not so good as it is in the per- tive view. The character of the prison would inly not have been adequately portrayed had the e been approached from an interior court, for the rast between the agreeable, if somewhat severe, esticity of the governor's abode and the cold, mfortable aspect of that of the prisoners is well lated to inspire the beholder with a respect for the For there are placed side by side a specimen of tecture expressive of a condition of human om and another which denotes a condition of ceration. The building appears to preach a on and to tell us of the punishment which awaits riminals. To have placed the little windows of ells upon the outside would have been a breach of taste; such a course would indicate that our s gloated in the torture they were inflicting upon nfortunate inmates. An arrangement like that is bjectionable as the public executions which all sed communities have abolished. Consequently nly way out of this difficulty was to surround the n with plain walls; but Dance must have then d that a further difficulty arose, for if no windows visible there was nothing to show that the ing was habitable at all. The requisite note of esticity could only be imparted by incorporating governor's house into the design. Thus, Dance ted his prison with the requisite character in the way in which this could be done without violating anons of good taste, but it is possible to contend it is not a complete artistic success. The façade, cking in homogeneity, can hardly be described as nity." But if we relax our standard of criticism le, we might all affirm in unison that the result is ently satisfactory so long as we are permitted to rd it as a highly original "trinity." The truth is many of the problems with which an architect has al are quite insoluble, and if he attains character buildings he has often to sacrifice form, and vice . Just a few masterpieces have both perfect form perfect character, but such an excellence is rarely ble except in the case of buildings whose purpose ceedingly simple. But in the case of architecture n has to fulfil a multifarious function, we must don the hope of designing a unity if we wish at ame time to attain to complete expression. We then take refuge in the *group*, such as we see in an assemblage of school or university buildings. oup can in a certain measure be a unity, especially has some dominant member which is the centre of est and the climax of the whole, but such a unity is tically of a lower order than that which is possible e case of a single symmetrical building; for the laws that govern its composition are not nearly so rigorous. These considerations are of importance in a review of Classic Architecture, a style of building in which the conflict between form and character is especially acute, and we shall return to them at the end of this article.

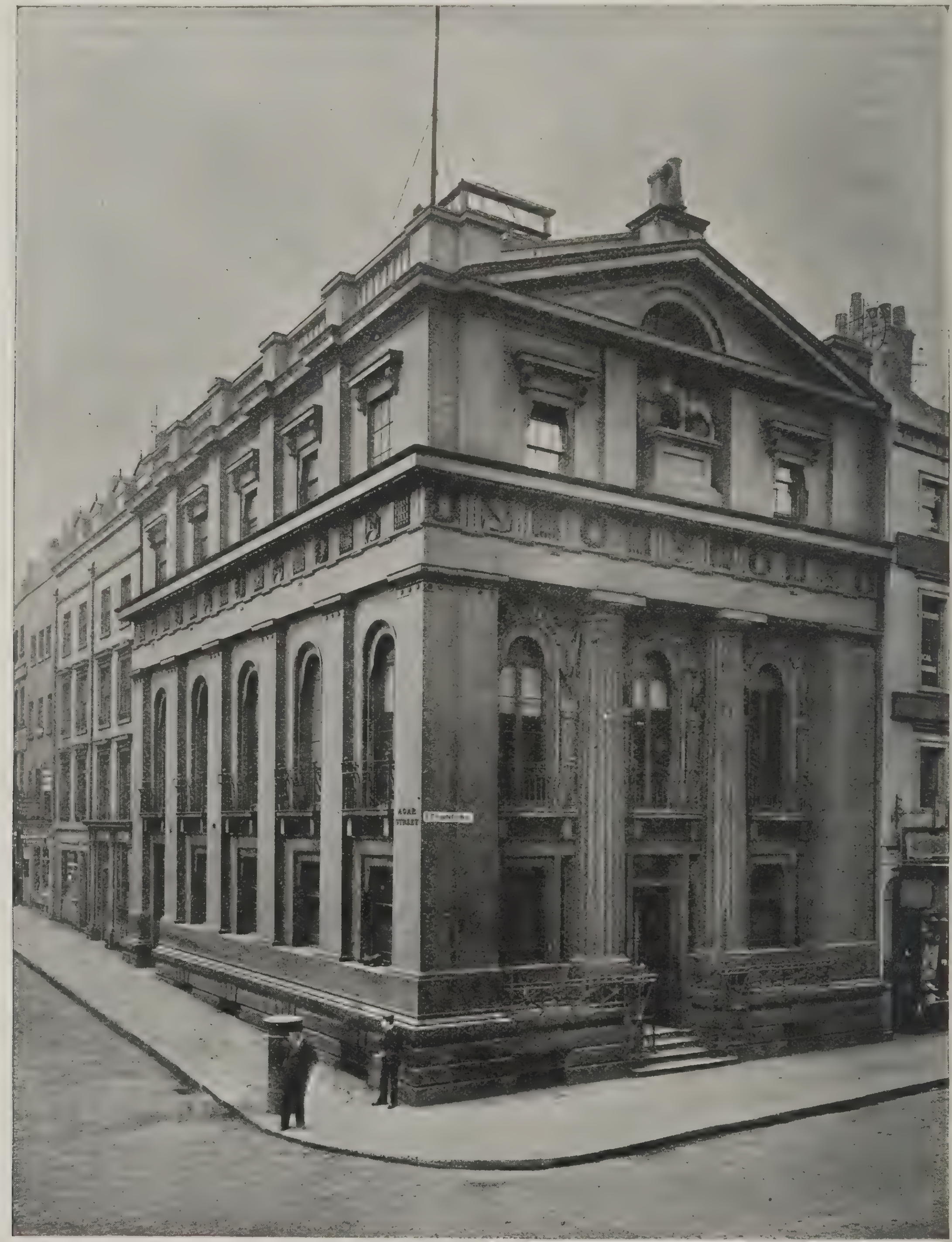
The Græco-Roman phase, the second on Mr. Richardson's list, may be said to have been initiated by Stuart and Revett, whose "Antiquities of Athens" had a profound influence. The researches of Cockerell and Penrose also helped to turn the attention of architects towards Greek models. Soane and Nash are the chief figures dealt with in this portion of the book—two artists as dissimilar in temperament as any that could be found. They have this in common, however, that untli quite recently they have both suffered from an undeserved neglect. This book will do much to restore their reputations, though, alas! it comes too late to save Regent Street, Nash's masterpiece, which an indifferent public opinion has doomed to destruction. Mr. Richardson tells us that "his particular forte was the harmonious grouping of masses of buildings, all of which, although different of composition, produced unity of effect by being placed in juxtaposition. Although Nash was deficient in the elementary education of his profession, lacking both construction and detail knowledge, he was a great artist, and his architecture, while it is far from faultless, is, notwithstanding, effective." The photographs of the Bank of England, especially of the interior halls and courts to which the public is not admitted, will be to many readers a revelation of Soane's genius.

The Napoleonic wars made travelling in Italy impossible, so for a certain period English architects were obliged to seek inspiration in Greece alone, and hence we have a group of men whose work Mr. Richardson summarises in his third chapter entitled "The Greek Phase." He does full justice to Smirke, while Wilkins, Decimus Burton, Goodridge, Thomas Hamilton, and Playfair are among those dealt with in this section, and receive their proper meed of praise.

Following the first three phases, there comes what Mr. Richardson describes as the Neo-Grec and Italian phase. These are two parallel movements, both of which are the outcome of a certain dissatisfaction with past results. The ordinary motifs of Classic ornament were beginning to tire through frequent repetition, and an attempt was made to invest them with more flexibility. It was here that Professor Cockerell distinguished himself, and in inventing new forms of Classic detail and in finding new applications of old forms he displayed great originality and resource. Some people hold that he occasionally displayed the type of originality which is reprehensible, and his Ionic Caps and blanketed columns have been severely criticised; there can be no doubt, however, that he left to his successors a rich vocabulary of ornament, which has considerably enhanced their power of artistic expression. Cockerell's own compositions have not been universally admired, and his greatest work is perhaps to be found in St. George's Hall, where he was called upon to carry into execution Elmes's superb design and to provide drawings for much of the interior decoration.

The Italian phase, like the Neo-Grec, was also due to a weariness of too-often-repeated forms. In this case the column was the offending member, and a revolt was made against the practice of introducing columns in places where they were not performing a utilitarian function. Astylar buildings can be very beautiful, and Barry and others did a great service in calling attention to the beauty of which they are capable, but it must be remembered that the column has a decorative as well as a utilitarian use, and it is quite impossible to confine it to the latter.

The main question which every reader of this volume must ask himself is this—do the buildings here portrayed prove that the Classic style can suitably be adopted in every type of modern building? The critic of the Classic style will say that we have a dome over a pediment as the principal feature of a Customs House, a Law Court, a University College, and a Royal Exchange, while there are certain cathedrals also distinguished for this combination of elements. He will ask whether the character of these buildings has been expressed. He will also complain that a pediment over a tall portico is used in clubs, private houses, railway stations, banks, museums, and libraries.



WESTMINSTER INSURANCE OFFICE, STRAND (DEMOLISHED 1908). C. R. COCKERELL, R.A., ARCHITECT.

(From Richardson's "Monumental Classic Architecture.")

Everybody can admit Hamilton's High School at Edinburgh is a design which it is impossible to defend. It is as little like a school as it could possibly be. The great task to which modern architects must set themselves is the imparting of character to buildings. To those who say "Why not cease to practise the Classic style, if you find it so difficult to endow your structures with character?" we reply that it is also very difficult to

impart character to buildings in other styles, and arc
tecture consists of both character and form, and th
is no form except Classical form. That is the quar
between Classicists and mediævalists like Mr. Ma
Phillipps. The latter do not recognise that there is s
a thing as form in a building apart from its charac
and its construction.

It is impossible to praise too highly the illustrati
of this volume. Mr. Batsford and Mr. Dockree,
photographer, are to be congratulated upon them.
Richardson has described a period of developm
which sadly needed to be described, and his critic
analyses will be highly valued. His labours in travelli
all over the British Isles in search of Classic examp
must have been prodigious, and it is unfortunate th
the numerous architects whose masterpieces he h
presented to the general body of readers for the fi
time cannot arise and thank him for performing th
service to their reputations.

HERE AND THERE.

ME years ago there appeared in this Journal a very sad story of a young American architect whose career was blighted at the commencement ving a lady with a temperament for his first client. lady wanted a house—something Queen Annish, thing like a house she saw in Brookline, and some- like another in Columbus. There were to be a la and a garage, and dear old-fashioned windows, but they must have large plate-panes, because you could never expect to keep s if they had the corners of many small panes to . But these were all trifles compared with the s involved when the plans came up for discussion. lady knew what she wanted, and had drawn up plans herself. They were not nicely scaled, a 12 by 20 and another 6 by 4 being put side by ccupying the same space; besides, the stairs and chimneys were very strange. The architect ined that if he started the stairs on the ground as shown on the client's plan, and let them arrive e the client wished them to arrive on the first floor, would have to get under the bathroom somehow, he only way to do that would be to have the bath- suspended in some way from the roof by means ains. Naturally this gave rise to some trouble, he client clinched the matter by saying: "If I the stairs in a certain place. I want them there. e understand that." The next bother was with himneys. The client's plans showed the chimney n the dining-room on the left side of the house, he chimney flue in the room above on the right f the house, so that the flue would have to rise one y, then go across the floor, and so up. The archi- ointed out this difficulty. "Well," said the client, t of that? Suppose it does. You are an archi- You ought to be able to manage it somehow." architect took it all quietly, but said to himself: en the builder finds the kitchen chimney doesn't the upper section of itself by 3 ft., he's going to ery, very angry." As a fact, the builder was mely upset. When he first got hold of the plans ich, as the client said, were "as clean and plain a plans as ever were drawn"—he began to cry like y; later another mood came over him, and under pell he used to look at the ground-floor plan, then e first-floor plan, and then get behind a tree and r. However, the house was built eventually, and 's the end of that story. I have given a synopsis at some length because I have just come across a which is a companion to it.

* * * *

rough the March issue of "The Salon," which is fficial organ of the five institutions of architects exist in Australia, I learn of another career ted through the agency of a lady client, but in ase, though the architect is humbled, he recovers thing of the dignity of the profession by a happy of vengeance at the finish. Before proceeding the story it is necessary, as a sort of prologue, just ention the continued existence of that hoary dote concerning the architect who built a house orgot to provide a staircase, an anecdote which no especting layman proposing the toast of "The itects and Surveyors" would omit to recount. Our tect, then, was a man of considerable talent and llent prospects, but, though by nature gay and ponsible, he was haunted by the story of "The otten Staircase," the inevitable repetition of which perated him to the verge of frenzy. Among his ts was a rich and beautiful young widow, of whom ecame enamoured because she never suggested, ord or action, that she knew the story of "The otten Staircase." At his client's dinner-table one evening, in company with a few other guests, the architect was giving his attention to the *Ris de veau à la Financière* when his hostess remarked to the lady on his left: "Mr. —— is an architect," to which the lady replied: "Oh, how interesting! I always think architects must be such clever people." "But," said the hostess, "they make mistakes sometimes." This was the turning-point in the architect's career. Had his client only stopped with that simple remark, he might have gone forward to great things, but the inevitable happened: she told the story of "The Forgotten Staircase." He felt himself grow cold all over, beads of perspiration gathered on his brow. All was over; what did anything matter now? The ripple of polite laughter subsided, and he was left alone in the world. The next morning among his letters was one from his hostess, once enshrined, but now cast down to clay. She asked him to design a new house for her; she was going abroad in October, and would like to have everything ready by her return in the following May. Prior to the catastrophe he would have been heavens-high with this commission, but now it was the merest commonplace to him. With small interest he proceeded with the work. The house was built, his client came home, and paid a visit of inspection. Everything delighted her until the staircase hall was reached. On the plans this had been shown extending the full height of the house, a fine walnut staircase rising from floor to floor, and the whole being crowned by an octagonal lantern. The client gazed with astonishment. Yes, there was the first-floor balustrade, there was the second-floor balustrade, there were the doors to the bedrooms: but *there was no staircase.* She turned to the architect with tears in her eyes. But he passed quietly out with a grim smile. He had had his revenge.

* * * *

Architecture at the Academy is dealt with elsewhere in this issue, so it is my good fortune not to be called upon to give any critical estimate of it in these columns. I have, however, been round the familiar little corner room and seen the show, and there is just one aspect of it which I may be permitted to comment upon. It is, that architects in this country would appear to be doing quite a brisk export trade. Let me run over the shipping orders. First and foremost, there are the new Government buildings at Delhi, by Mr. Lutyens and Mr. Baker. India also provides several other good jobs, including a Maharajah's palace for Sir Ernest George and Mr. Yeates, a new store at Singapore for Messrs. H. O. Ellis and Clarke, and for Mr. T. W. Watkins the Church of St. John at Nazareth, South India—a place I had no inkling of before I saw it in the Academy catalogue. Africa provides Professor Beresford Pite with another Uganda church—this time the Cathedral of St. Paul at Namirembe, and Mr. Lionel U. Grace with shipping offices at Freetown, Sierra Leone. Mr. Baillie Scott, it would seem, exerts an influence in unsuspected climes, for he shows one house in New Jersey and another in Poland. Mr. Philip J. Marvin has a drawing of a new church at Malta. Coming nearer home, we find a very nice model of a house in France by Mr. Ernest Newton; a monument on the bank of the Rhine, near Cologne, by Mr. W. S. George; a house near The Hague by Messrs. Dickie and Scott, and another house in Holland by Mr. Maurice E. Webb; a house in Madrid by Mr. Grey Wornum, and the Madrid Golf Club by Messrs. Tubbs, Messer and Poulter; and a house in Jersey by Messrs. Niven and Wigglesworth. Quite a respectable list, and one that suggests that architects in a congested profession should ever remember the old phrase—home-keeping youths have ever homely wits.

UBIQUE.

THE ARBITRATION CLAUSE.

BY W. VALENTINE BALL, M.A., BARRISTER-AT-LAW.

MR. VALENTINE BALL, who read a paper on this subject before the Society of Architects on April 16, said that he would not necessarily deal with arbitration in its every aspect, he only wanted to discuss certain practical points which had given lawyers and architects a good deal of difficulty. He would take first the arbitration clause (Clause 32) in the R.I.B.A. Form.

The Clause in the R.I.B.A. Form.

Its general effect, he said, is as follows: It is that disputes which arise between builder and building owner are to be referred, not to a court of justice, but to an arbitrator named in the contract. In other words, the parties agree to be bound in certain matters by the decision of a self-appointed tribunal. That arbitrator is to have full power to settle all matters in dispute subject to this, that certain questions which arise in the course of the works are left to the decision of the architect.

Matters Upon which the Opinion of the Architect is Final.

The following is a list of matters with regard to which the word of the architect is final. These are:

(*a*) A decision of the architect with regard to discrepancies in the drawings, or between the drawings and the specification (Clause 4);

(*b*) The dismissal of any workman at the request of the architect (Clause 9);

(*c*) The removal of improper materials and the removal and re-execution of work not in accordance with the drawings, specification, or instructions, provided the decision is given during the course of the works (Clause 16);

(*d*) The assignment and sub-letting of any portion of the works (Clause 19);

(*e*) A decision of the architect that part of the work shall be opened up for inspection (Clause 18).

Matters which May Have to be Determined by the Arbitrators.

The following are examples of questions which may have to be determined by an arbitrator:

(*a*) Whether a particular piece of work is wholly outside the contract, and, if so, what is to be paid for it (see Clause 1);

(*b*) Whether a particular piece of work is to be reasonably implied from the drawings, etc. (see Clause 4);

(*c*) A decision that errors in setting out shall be amended at the cost of the employer (see Clause 6);

(*d*) Whether a defect arising within a stated period from completion was due to materials or workmanship not in accordance with drawings, specifications, or instructions (see Clause 17);

(*e*) Whether work opened up was or was not executed in accordance with drawings, specifications, or instructions (see Clause 18);

(*f*) Whether an objection made by the contractor to a specialist was or was not reasonable (see Clause 20);

(*g*) Whether the works were injured by frost or other inclemency of the weather (see Clause 21);

(*h*) Whether the works could reasonably have been completed by a certain date (see Clause 24);

(*i*) Whether or not the contractor was entitled to an extension of time (as provided by Clause 25);

(*j*) Whether a notice given by the architect to proceed with the works in accordance with Clause 26 was reasonably or properly given (see Clause 26);

(*k*) The arbitrator may be asked to review a decision of the architect as to the value of works executed which justify the grant of a certificate, and the refusal of the architect to grant a certificate (see Clause 30).

Whether Arbitrator Can Decide a Point Arising After Completion.

There is one point upon this clause which has not, so far as I know, been judicially considered, yet it goes to its very root. Look at the first few words of the clause. You will observe that the arbitrator only has jurisdiction "in case any dispute or difference shall arise between the employer, or the architect on his behalf, and the contractor, either *during the progress of the works*, or *after the determination, abandonment, or breach of the contract.*" It is clear from this, that if a dispute arises while the works are in progress, *e.g.*, before the roof is on, the arbitrator has jurisdiction. It is also clear that his aid can be invoked in a case where the builder throws up the job, or the employer commits a breach of the contract by not allowing the builder to complete. The doubt remains: has the arbitrator jurisdiction after the job is finished in the ordinary way? You will notice that he has jurisdiction with respect to a dispute arising after the *determination* of the contract. Were this the only clause in the whole contract in which the word "determination" is used, I should take the view that it is equivalent to the word "end" or "completion." But if it means, or is intended to mean, "*completion,*" nothing would have been easier than for the draughtsman to use the word "*completion.*" That word "completion" is, in fact, used in the contract. See, for instance, Clause 17, which deals with defects, etc., appearing "within . . . months from the completion of the works." The fact is, however, that the word "determination," as used in this contract, is a term of art—that is to say, it is a word with a special meaning. Look, for instance, at Clause 31. That clause provides for what is to happen if the employer does not honour a certificate, or if the employer becomes bankrupt, and the trustee in bankruptcy does not satisfy the contractor that he can carry out the contract. In these cases, the contractor may *determine* the contract by notice in writing to the architect, and recover from the employer payment for all work executed, and for any loss he may sustain upon any plant or material supplied or purchased or prepared for the purposes of the contract. "Determination" of the contract is therefore a different thing from "completion," and I venture to express the opinion that after final completion of works, the assistance of the arbitrator appointed under the contract can no longer be invoked. For instance, suppose a defect appears after completion—such, for instance, as subsidence of a wall, or the dry rot of joists on the ground floor. The employer may complain that these defects were due to the fault of the builder, but if he wants to obtain redress he must do so by action of law. In this connection, it should be borne in mind that the final certificate of the architect is not conclusive as to the sufficiency of any work or materials which it relates so as necessarily to reli the contractor from liability.

Damages for Delay When Time Ha Been Extended.

There is a very important quest arising on the Institute form to whic would like to refer. The architect power to extend the time for comple in certain cases. Thus, if delay is cau by a strike or bad weather, or extras, in consequence of the contractor having received in due time necessary structions from the architect, the archi must make a fair and reasonable extens of time for completion in respect ther Mere extension of time, however, will always be sufficient for the contrac Delay may have the effect to throw work over into the winter months, o may otherwise increase the cost by ren ing it necessary for building operation be carried out at a time when labou scarce and expensive. May the emplo in such circumstances, claim damages seek to have the amount determined arbitration?

This very question arose in a rec case, which is not reported, but wh came under my notice. The name of case is Trollope and Sons and Colls Sons, Ltd. *v.* W. M. G. Singer, an was heard by Mr. Justice Channell, December 1, 1913. The material f were, that owing to delay in giving or for works, the clerk of the works was idle, and the builder sustained o damage. He sought to recover thi arbitration proceedings, when the ployer took the point that there was claim.

Mr. Justice Channell said (accordin a copy of the shorthand note of his j ment):

"I have only to deal with certain ters which are set out in the award for opinion of the Court. If he has inclu matters outside his jurisdiction it is the Divisional Court and not for me take them into account. In substance award in the form of a special cas equivalent to a request by the arbitr to inform his mind upon certain points have to deal with the contentions put ward in paragraphs 18, 19, 20, and 21.

"Paragraph 18 is as follows [His L ship read this paragraph and continue

"It is contended that the power to tend the time which is given in cer events by Clause 25 has effect to prec a claim for damages if there is an ex sion of time. In other words, it is u that an extension of time is to be dee to satisfy all damage. Now, I can think that is what it means. The cl specifies a number of events on the pening of which the architect is powered to extend; indeed, he is not empowered, but the clause says he s in those events, make a fair and rea able extension of time for completio respect thereof. I have to consider they are. They fall into three catego The first two are *force majeure* and ceptionally inclement weather. In spect of these the contractors might less they were specially provided fo the contract) say: 'It really is not fault that I have not completed: weather was bad.' He could mak grievance, but if he has contracted to the work within a particular time the

ıld be his according to our law.
ıough, in that case he might ask for
extension he would not be entitled to
Unless the contract contains some
ı clause as 25, which provides for *force*
eure, the contractor would have to
the risk. The clause then goes on
different class of thing, 'by reason of
ıorised extras or additions.' Autho-
d extras and additions are, of course,
as authorised and contemplated by the
ract. They do not amount to a breach
ontract. It is no breach of contract
ın employer to order something extra,
as a rule the contract shows that it is
emplated that there shall be extras,
the contract even provides a way of
ing with them and a way of ascertain-
them. Nevertheless, an extra is a
g which, if done, and if so done as to
e it impracticable to complete the
k in the contract time, prevents the
ractor being bound to complete within
time, and it is a matter which it is
ously reasonable to provide for by an
nsion of time.

In Jones *v.* St. John's College, L.R. 6
., 115, the strict rights of the employer
preserved to him in respect of non-
pletion in the extended time. Then
e is a third event or series of events
hich this clause comes into operation.
t is a breach or breaches of contract
he employer. I do not distinguish be-
n a breach by him and by his agent.
uch breaches are committed, and if
have the consequence of preventing
contractor completing the contract
in the contract time, they do not
tly give him an extension, but they
him from the consequences of non-
bletion. They free him from penalties,
in that case there is a condition of
gs which it is desirable to provide for
iving the architect power to extend the
. It follows that there are three
es of cases in which it is desirable to
the architect power to extend the
. Why is that a reason to deprive
contractor of his remedy in damages?
ı see no reason whatever for doing it.
e is ample reason for the clause, but
are no words in it which deprive the
actor of his right to damages. When
is extended, that affects the con-
or not merely in the time he had to
in order to complete, but it also
ts him pecuniarily in the way of
ıges. Why the employer should not
damages I cannot see. This is a
le case where, by reason of the delay
ving orders to go on with the work at
particular place, certain work was
dle on the place, and the clerk of the
s or somebody on the spot who had to
aid was idle. An extension of time
prevent the contractor being liable for
, but it will not put back into his
et the damage which he has sustained
eason of having the men there and
g them. It seems to me he has a
to have those damages, and I must,
fore, decide against the employer."

ıave given that extract from this
nent at length, because it is not re-
d elsewhere, and may be of value to
members of the Society who ever
to construe Clause 25. The case of
v. Whitehaven Trustees (1888),
3.C., 118, may also be referred to in
onnection.

nds for Objecting to an Arbitrator.

lo not propose to consider all the
ıs grounds upon which an arbitrator
be objected to, but there is one aspect
matter which it is important to deal

question has arisen in many recent
cases whether a person employed and paid by one party to a contract can properly act as arbitrator in the settlement of disputes. This point is hardly germane to a discussion of Clause 32 of the R.I.B.A. Form, because it is there impliedly, if not expressly, declared that the arbitrator shall be an independent person. Thus (as we have already seen when perusing the clause), disputes are referred "to the arbitration and the final decision of A, B, or, in the event of his death, or unwillingness or inability to act, of C D, or in the event of his death or unwillingness or inability to act, of a person to be appointed on the request of either party by the President for the time being of the Royal Institute of British Architects, and the award of such arbitrator shall be final and binding on the parties." It is manifest that the architect, that is to say, the architect acting under the contract, could hardly be the arbitrator within the meaning of this clause. If he were, he might be placed in the absurd and anomalous position of having to review his own decisions!

Conduct of the Arbitrator.

The function of an arbitrator is similar to that of every judge. He is there to "hear and determine." Let me remind you of what one of the greatest chancellors of all time said concerning the duty of a judge. "Judges," wrote Francis Bacon, in his essay entitled "Of Judicature," "ought to be more learned than witty, more reverend than plausible, and more advised than confident." And again, "Patience and gravity of hearing is an essential part of justice, and an overspeaking judge is no well-tuned cymbal. . . . The parts of a judge in hearing are four: To direct the evidence; to moderate length, repetition, or impertinency of speech; to recapitulate, select, and collate the material points of that which hath been said; and to give the rule of sentence."

It would be almost impossible to state the whole duty of a judge in smaller compass.

Fees.

A brief word upon the sordid but not wholly unimportant question of fees. The arbitrator may fix his own fee if nothing is said about the matter when he undertakes the reference, but subject to this, that if he makes an exorbitant charge it can be recovered from him by action (Fernley *v.* Branson, 20, L.J.Q.B. 178).

As to the amount to be charged, I need not say much. Suffice it that fees run high, and properly so, for an arbitration takes up all the working hours of the day and interferes considerably with the practice of a profession. That the judges recognise this fact appears from the case of Mason *v.* Lovatt, 23, T.L.R. 486.

In that case a quantity surveyor had acted as arbitrator in a dispute between a firm of plumbers and a builder. The reference lasted for twenty-two days, and the arbitrator was subsequently employed for thirteen days in considering the case. He also took the advice of a solicitor and counsel on certain points of law. He charged £527 10s., which included ten guineas a day for thirty-five days, and £110 6s. for fees paid for legal advice. The district registrar, disregarding the evidence of surveyors in good position, held that five guineas a day was sufficient and reduced the above amount by £283 0s. 6d. The Court of Appeal set this judgment aside. Dealing with the surveyor's remuneration, Lord Justice Moulton said, "The evidence is all one way, that the price charged by him was fair for a person belonging to his profession and occupying the position which he occupied in that profession. The district registrar was not entitled to set that evidence aside. The true standard, in my opinion, of what should be paid in such a case is what a fair-minded man in the position of the referee would have required if a bargain had been freely made beforehand. In this case, there is no ground for supposing the referee has charged more than would have been required by a fair-minded man in a free bargain."

There is one satisfactory point about fees, and that is that the arbitrator should have but little difficulty in recovering them. He is entitled to keep back his award until the fees are paid. As a rule he saddles the party who is unsuccessful with payment of his fees, making them part of the costs.

R.I.B.A. ANNUAL REPORT.

The annual report for the official year 1913-14 states that the present subscribing membership totals 2,603 and is composed as follows: Fellows, 852; Associates, 1,695; Hon. Associates, 56. The total membership for the preceding year was 2,531.

Since the last annual general meeting there have been elected 30 Fellows, 97 Associates, 2 Hon. Fellows, and 3 Hon. Associates. There are now 2,070 Licentiates on the roll. In the past year 17 Licentiates have passed the Special Examination qualifying for election to the Fellowship, and 10 have been duly elected as Fellows.

During the course of the year the President has appointed the following architects to act as Arbitrators in connection with building disputes:—

Adams, H. Percy.
Cautley, H. M.
Clarke, Max.
Corbett, E. W. M.
Crompton, W. E. Vernon.
Cross, A. W. S.
Dawber, E. Guy.
Downing, H. P. Burke.
Flint, Ernest.
Garbutt, Matt.
Green, Mowbray A.
Greenop, Edward.
Hall, Edwin T.
Halliday, G. E.
Jerman, James.
Lanchester, H. V.
Livesay, G. A. Bligh.
Oatley, G. Herbert.
Peach, C. Stanley.
Redfern, Harry.
Searles-Wood, H. D.
Seth-Smith, W. H.
Seward, Edwin.
Slater, John.
Stoner, Alfred.
Sutton, Ernest R. E.
Waterhouse, Paul.
White, W. Henry.
Wilson, A. Needham.

Competitions.

The following have been the President's appointments to Assessorships during the year commencing May, 1913:—

Bradford, Dwelling Houses.—Mr. Henry T. Hare.
L.C.C., Elementary Schools.—Mr. John W. Simpson.
Manchester, Additions to Royal Exchange.—Mr. James, S. Gibson.
Sunderland, Training College.—Mr. P. S. Worthington.
Bath, Secondary School.—Mr. Henry T. Hare.
Hendon, Swimming Baths.—Mr. H. W. Wills.
London, Metropolitan Water Board Offices.—Mr. E. Guy Dawber.
Paddington, Central Baths.—Mr. Leonard Stokes.

Mr. T. E. Collcutt was appointed Assessor in the Ottawa Government Buildings Competition by the Council of the Royal Institute at the request of the Canadian Government.

Problems in Design.

During the year 524 designs have been received and adjudicated on by the board, and of these 373 have been approved, being an increase of 296 and 224 respectively on the previous year. These designs have been publicly exhibited in the Galleries of the Royal Institute for three days after each adjudication, and a large number of visitors have availed themselves of the opportunity of viewing them.

Report of the Art Standing Committee.

Mr. E. Guy Dawber was elected Chairman, and Messrs. W. A. Forsyth and Percy E. Lovell Hon. Secretaries.

It was felt at the early meetings that some definition in the work of the Committee was necessary in order that matters could be dealt with which were not necessarily the work of the Council. Careful consideration was given to this matter, and the functions were defined as follows:—

1. To deal with the preservation and repair of national monuments.
2. To consider the artistic aspects of all propositions for new works and public improvements.
3. To make suggestions as to public improvements of an architectonic character.
4. To consider any course that should be adopted for the purpose of securing a higher standard of architectural design, taking into consideration both the training of the architect and the education of the public.
5. Generally, to deal with all matters tending to advance the art of architecture.

Report of the Literature Standing Committee.

At the beginning of the session the following officers were elected: Mr. W. H. Ward, Chairman; Mr. Charles E. Sayer, Vice-Chairman; Mr. C. Harrison Townsend and Mr. W. G. Newton, Hon. Secs.

The Committee are glad to be able to announce that their recommendation to the Council that an increase should be made in the annual grant to the Library has been adopted, the Council having now raised the grant to the sum of £200.

The Librarian reports that during the present year 239 volumes and 37 pamphlets have been added to the library, exclusive of periodicals, reports, and transactions of societies, and parts of works issued in serial form.

Report of the Practice Standing Committee.

The officers elected at the commencement of the session were Mr. W. Woodward, Chairman; Mr. Max Clarke, Vice-Chairman; Messrs. Herbert A. Satchell and Matt Garbutt, Hon. Secretaries.

The Committee have had under consideration various matters, of which the following are the most important: Revision of Conditions of Contract, L.C.C. By-Laws, Quotation of Prices by Merchants to Architects, Position of Sub-Contractors, and Form of Sub-Contract, Guide to Professional Practice and Sessional Paper, L.C.C. General Powers Act, 1909, and Form Published by the District Surveyors' Association, Practice as to Opening of Tenders, Use of Licentiateship Affix, Tendering by Architects, Notes on Dilapidations, Special Committees, Housing, Town-Planning, etc., 1909, L.G.B. Draft Regulations, Official Architecture Committee, Cottage Building, Members' Queries, etc.

The reports of the Science Standing Committee and the Town-Planning Committee are included. The auditor's report shows that in the income and expenditure accounts of ordinary funds there is a balance for the year of £1,302 1s. 3d. The interest on the overdraft for the year is £152 13s. 9d., in place of £274 3s. 10d. last year, the overdraft being £4,846 7s. 1d. in place of £6,391 13s. 11d. last year.

The income from the Galleries amounts to £312 6s. 3d., in place of £365 3s. 2d. last year.

BOOK NOTICES.

Houses and Gardens.

Mr. Lawrence Weaver has performed a service to architects in presenting to them in a compact shape a series of photographs illustrative of the chief buildings hitherto designed by Mr. Lutyens. It is perhaps unusual for an architect to have his biography written and his works collected in permanent book form while he is still in the prime of life and practising vigorously. In this case, however, it was quite a justifiable course, and the work before us has some of the characteristics of a complete whole, for in a certain sense it marks the end of an epoch in the career of Mr. Lutyens. He has made a great contribution to domestic architecture, and while he will no doubt repeat his old triumphs, it is unlikely that he will make many fresh conquests in that field. One may perhaps assume that the design of isolated country houses will not in the future absorb so much of his energies as it has done in the past, and that on his appointment as one of the architects of the new Imperial capital at Delhi he is entering upon a new phase, and will henceforth devote considerable attention to the study of town-planning.

The main characteristics of Mr. Lutyens's country houses will probably be familiar to readers of this journal. His work may roughly be divided into three periods: the first, in which he adopted a picturesque manner; a very free eclecticism is characteristic of this, and he succeeded in obtaining very charming effects. His second stage may be described as that of Sussex vernacular, and his work of this type in the opinion of many people represents Mr. Lutyens at his best. "Orchards," Godalming; Tigbourne Court, and "Grey Walls," Gullane, have a quite unique beauty. In his third period he began to practise in the Georgian style. Great Maythans, Kent, may perhaps be considered as the most successful of his houses designed in this manner. It is noticeable that Mr. Lutyens's changes of method have always been in the nature of a closer approach towards Classicism. Mr. Weaver expresses the opinion that every architect "is forced to concentrate, to develop the sense of order in preference to the picturesque, to see more in mass than in detail, and thus unconsciously to derive inspiration more and more from the great masterpieces of Greece and Rome." To illustrate the kind of attraction which Georgian architecture must have exerted upon Mr. Lutyens he quotes a passage upon the same matter by Robert Louis Stevenson, who wrote: "I do not know if I have explained to you the sort of loyalty, of urbanity, that there is about these eighteenth-century houses to my mind; the spirit of a country orderly and prosperous, a flavour of the presence of magistrates and well-to-do merchants in big wigs—something certain and civic and domestic is all about these quiet, staid, shapely houses with no character but their exceeding shapeliness, and the comely external utterance that they make of their internal comfort." Not everybody will be able to share Mr. Weaver's enthusiasm for Mr. Lutyens's work at the Hampstead Garden Suburb. Few people would agree with his verdict that both the churches there possess "a large dignity," and it is not easy to accept the view that there is "a homely monumental character" about them "secured by the treatment of their great roofs." In the first place one might
say that a church ought not to h
domestic character; homeliness is th
quality it should possess: secondly,
building is homely it can hardly be n
mental at the same time; and, thirdly
is to be monumental such a result
never be attained by means of a stee
broken by windows such as we see i
Lutyens's churches. This sentence q
is rather typical of Mr. Weaver's
cisms of architecture. In his an
desire to indulge in eulogy, he will
times credit a building with the most
tradictory qualities. The photogra
this volume are excellent.

"Houses and Gardens." By F. L Lutyens,
F.R I.B.A. Described and criticised by La
Weaver. London: 20, Tavistock Street, Cove
den, and George Newnes, Ltd., 8-11, South
Street, Strand, W.C. Price 25s. net.

The Work of Mr. Charles A. Pl

Mr. Platt is the most eminent exp
of domestic architecture in America
this sumptuous volume illustratin
designs is especially welcome. At
when most architects adopt their p
sion almost in their boyhood, it is int
ing to trace the career of one who
long training as a painter and etch
fore it ever occurred to him to exerc
talents upon the creation of buil
Mr. Royal Cortissoz, who writes an
duction to this folio, gives some in
ing biographical facts. Mr. Platt's
tion was first drawn to architectura
jects when he studied at the Beau
school. "At the Ecole he was bou
learn something about the Cl
orders, and all through his French
rience he was studying architecture
the point of view of the artist. Th
course, there were budding arc
among his fellow-students in the
Quarter, and while he looked over
'projets' and talked and talked he
milated quantities of architectural
as he did when he returned to Ar
and forgathered with many friends
profession." Mr. Platt was early
rested in the subject of gardens, a
decided to accompany his brother
was a landscape-architect, on a long
pean tour. "Platt was prepared no
to paint the gardens, but to make
exact studies. They made ca
measured drawings, they had a c
with them, and on their return
brought an accumulation of data
than anything of the sort previously
in America." Mr. Platt felt that aft
experience he was equipped to pr
landscape architecture himself, and
designing several gardens he was n
naturally inspired with the wish to
houses as well. This desire was pr
stimulated by the reflection that ther
few houses in America worthy of the
did setting he was competent to give
But his success was only made possi
a certain change of habits in the Am
people. He took the later turning
career just when country-house
America was approximating to the E
ideal. Mr. Cortissoz tells us:
Americans have always been a
people for summer holidays, but fo
the country meant holidays to cit
and nothing else. The mansions
wealthy, away from their urban h
were built in colonies at places like
port. Then with something like s
ness the big and permanent country
came into fashion, the lordly dwellin
ing no relation at all to even the
luxurious 'cottage' of previous g
tions. Stone and brick, much mor

're, took the place of clap-boards and
gles. Interiors rivalled in artistic dis-
ion the most elaborate establishments
ıe city, and the architect no longer
ıned his operations outside to a stretch
ıwn or a small enclosure of flowers.
lealt lavishly in terraces, pools, and all
ner of gardening schemes. At the
of this prodigious efflorescence the
ners concerned may be said to have
led themselves into two camps. In
far larger than the other, were those
were willing that their patrons should
d vast sums of money and knew how
xpress such sums on the surface of
work. They took care of those
erous estates which are before all else
eous and even ostentatious. In the
camp were men who needed money
but put taste in the first place." Platt,
ourse, belonged to the latter division,
his houses are obviously not the abode
e vulgar type of millionaire, but have
gnity and refinement which suggest
they are inhabited by men of culture.
y in the course of his practice he ac-
d an acute sense of Classical forms
details. He is an adept at the use of
arge external order, and while many
s façades have a certain note of gran-
they are eminently domestic in cha-
r. In some of his designs there is a
e interfusion of the Italian and "Colo-
" manners. These long, low, white
les are eminently pleasing.

may be noted that he does not scruple
ake use of the despised stucco and is
to appreciate the qualities of this
rial, which can so suitably be adopted
lomestic architecture. It might be
if his example were widely followed
is country too, as it certainly would
could only get rid of the stupid Rus-
n notion that the use of stucco indi-
the low moral character of the
ler who wishes to conceal bad brick-
. The surface of good stucco is an
rable foil for the decorative elements
façade. Most of Mr. Platt's houses
imple and symmetrical in form, but
able to impart interest to them by
ıs of delicate architraves to the win-
, and by clever treatment of balconies.
possible to make a slight criticism
regard to his disposal of chimneys.
e features seem often to be placed in a
azard manner, with the result that his
es, as seen from a distance, look a
restless. Of course, chimneys must
laced in such positions as are neces-
but there is one general rule which
be proclaimed without any undue dog-
sm. When a building has a parapet
or crowning balustrade, the façade is
ded with such a pronounced termina-
that an irregular arrangement of
neys, provided that these are not very
does not disturb us very much. There
much formality in the lower part
we hardly notice them. But where
oof has eaves, as many of Mr. Platt's
ın-tiled roofs have, then it becomes a
nore important part of the general
osition, and the chimneys also be-
more prominent. That is why in
elegant Georgian houses, where the
come right down upon a wooden cor-
immense pains were taken to arrange
lan in such a manner that the chim-
should be symmetrically placed. Mr.
's gardens are delightful examples of
al planning. and they are distin-
ıed by the employment of old-
oned motifs, which can never lose
n. For instance, a long avenue of
leading up to a house is always an
ive arrangement. This volume is provided with some plans of the gardens exquisitely rendered, and they give a very good idea of the relation between the houses and their environment. Some of his schemes are rather marred by too much vegetation, or, rather, vegetation in the wrong place. Often the outline of gate-posts, fountains, and paths is obscured by foliage. Trees, shrubs, and flowers should be only an embellishment, and should never obstruct our vision of important architectural features.

Unfortunately, the volume costs 20 dols., but it is to be hoped that there may be produced a cheaper edition of a work which every architect ought to have in his library.

"Monograph of the Work of Charles A. Platt," with an Introduction by Royal Cortissoz. The Architectural Book Publishing Co., Paul Wenzel and Maurice Krakow, 31, East 12th Street, New York. 20 dols. net.

SOCIETIES AND INSTITUTIONS.

LIVERPOOL ARCHITECTURAL SOCIETY.

The St. George's Hall Podium Question.

The annual meeting of the Liverpool Architectural Society (Incorporated) was held on March 27, at the society's rooms, 13, Harrington Street, Mr. G. Hastwell Grayson, the retiring president, occupying the chair.

According to the report, the membership of the society consisted of 70 Fellows and 59 Associates, while there were also three Hon. Fellows, nine Hon. Associates, and nine Students. In moving the adoption of the report, the Chairman observed that it was a great pity there were not more younger members coming in. They were going backwards so far as students and associates were concerned, although they were progressing as regarded fellows. He suggested that perhaps some of the senior members of the profession might be able to use their influence to induce more of the younger members of the profession to join. Dealing with the finances, he said there was £234 standing to their credit, which had been invested. They also had a fund for opposing the suggested alteration to St. George's Hall. He had communicated with the Town Clerk, and had received a very guarded reply, to the effect that the Town Clerk was by no means in a position to say whether the Podium suggestion was dead. The Chairman extended a cordial welcome to the new president, Mr. Gilbert W. Fraser. The other officers elected are as follows: Vice-presidents, Messrs. E. P. Hinde and W. E. Willink; hon. secretaries, Messrs. Egerton L. Bower and Duncan A. Campbell; hon. auditors, Messrs. J. Woolfall (Fellow) and D. Bullen (Associate). The following unofficial members of the council were elected: Fellows, Messrs. E. B. Kirby, O. D. Black, W. G. Dobie, T. E. Eccles, G. H. Grayson, R. Holt, and P. C. Thicknesse; Associates, Messrs. L. P. Abercrombie and H. O. Burroughs.

STOURBRIDGE MASTER BUILDERS' ASSOCIATION.

At the annual meeting of the Stourbridge and District Master Builders' Association, Mr. A. Timmins, of Halesowen, was elected president for the third year in succession. The following appointments were also made: Mr. H. Dorse, vice-president; Mr. Tooby, treasurer; Mr. Dorse, representative on the Midland Centre; and Messrs. Webb and Tooby, auditors.

THE ARCHITECTURAL ASSOCIATION.

At a special general meeting of the Architectural Association, held on Monday, April 27 (Mr. Maurice E. Webb (vice-president) in the chair), the following new by-laws in connection with country membership of the Association were adopted: "Any gentlemen engaged professionally in the study or practice of architecture, who is a member of an architectural society recognised by the Council of the Architectural Association, the headquarters of such society being not less than fifty miles distant from Charing Cross, is eligible for nomination as a country member.

"No one shall remain a country member after residing within fifty miles of Charing Cross for one year or more.

"Application forms for country membership must be signed by the secretary or other officer of the society of which the candidate is a member.

"The annual subscription of each country member shall be seven shillings and sixpence.

"Country members shall not be entitled to hold any office or to serve on the Council or to vote either at the election of officers and Council of the Association, or in connection with any other matter.

"Country members shall be entitled to such privileges as the Council of the Association may from time to time determine, and shall also be bound by all by-laws and rules governing ordinary membership."

ROCHDALE MASTER BUILDERS' ASSOCIATION.

The twentieth annual meeting of the Rochdale Master Builders' Association was held at the Freemasons' Hall, Oldham Road, on April 20. At the commencement of the proceedings Mr. W. Shepherd, the retiring president, occupied the chair. Officers were elected as follows: President, Mr. T. Howarth; vice-presidents, Messrs. T. Wilkinson and B. M. Smith; treasurer, Mr. F. Ashworth; secretary, Mr. Hugh Oldham.

ASSOCIATION OF CLERKS OF WORKS (H.M.O.W.).

The annual meeting of the above Association, held on Saturday, April 25, in the Trocadero Restaurant, Piccadilly Circus, London, was attended by about forty members. The meeting was followed by a dinner, at which Sir Henry Tanner, C.B., I.S.O., occupied the chair.

HOUSING EXHIBITION AND CONFERENCE.

An Imperial League Conference and Exhibition are to be held at the Imperial Institute during the present month. Many educational and medical authorities of Australia, Canada, and South Africa will be reading papers, and the exhibition will comprise a complete review of the town-planning movement as it has developed both in the United Kingdom and the Colonies. To the British section the town councils of Birmingham, Bradford, Liverpool, Dundee, Glasgow, and the Pottery districts are sending plans and diagrams of schemes in operation and in progress, while other exhibits will show model dwellings and garden suburbs in contrast. Several of the industrial villages that have been established in this country will be represented. The exhibition will be opened on May 18 by the Marquis of Salisbury. Tickets of admission will be sent free on application to the Hon. Organiser, 6, Bloomsbury Square, London, W.C.

MODEL ANSWERS TO R.I.B.A. EXAMINATION QUESTIONS.

BY WILLIAM FRISKIN, A.R.I.B.A., ASHPITEL PRIZEMAN, 1913.

We publish below the second of a series of Model Answers to Questions set for the Final Examination of the Royal Institu British Architects, held last November.

B_2. CONSTRUCTION.—PART I.

The following are the particulars of the 12-inch by 6-inch steel joist referred to in the various questions :—

Average thickness of flange, ·88 inch.
Thickness of web, ·5 inch.
Greatest moment of inertia, 375 inches^4
Least moment of inertia, 28 inches^4
Sectional area, 16 sq. inches.

Question 1.—Explain in simple language the meaning of the following terms in relation to the section of a beam or stanchion.

(*a*) Moment of inertia.
(*b*) Radius of gyration.
(*c*) Neutral axis.
(*d*) Section Modulus.
(*e*) Moment of resistance.

Answer.—(*a*) The Moment of Inertia (I) of a section is the sum of the products obtained by multiplying the area of each particle of the section by the square of its distance from the neutral axis.

The value of I is dependent on the distribution of the material about the axis considered, but is independent of the material of the section.

(*b*) If we can imagine a particle whose moment of inertia is the same as that of the whole section, the distance between it and the neutral axis is the Radius of Gyration ; and if for any column section the moment of inertia about any axis be divided by the sectional area, the square root of the resulting quotient gives the Radius of Gyration about that axis. The Radius of Gyration affords a relative measure of the stiffness of a column to resist bending or buckling.

(*c*) The Neutral Axis of a section under stress is the intersection of the plane containing all points which have no direct stress with any cross section of the beam.

(*d*) The Section Modulus of a section is a relative measure of the strength of the section, and is equal to $\frac{I}{y}$, where I is the moment of inertia of the section and y is the distance from the neutral axis to the extreme fibre of the section.

(*e*) The moment of resistance of a section is a measure of the strength of the section, as a beam, and is equal to the sum of the moments of the stresses in each particle of the section about the neutral axis of the section.

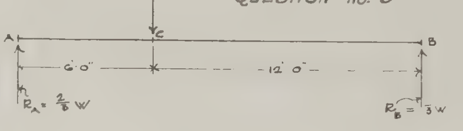
Question 2.—What is the weight of a cubic foot of steel? What is the safe stress per square inch of sectional area for mild steel?

(*a*) in tension.
(*b*) in compression.
(*c*) in single shear.
(*d*) in double shear.
(*e*) in bearing.

Answer.—490 lbs.

(*a*) $7\frac{1}{2}$ tons per sq. inch.
(*b*) $6\frac{1}{2}$ tons per sq. inch.
(*c*) 5 tons per sq. inch.
(*d*) 9 tons per sq. inch.
(*e*) 10 tons per sq. inch.

Question 3.—A 12-inch by 6-inch steel joist acts as a beam of 18-feet span with freely supported ends.



(*a*) Calculate what is the maximum safe load concentrated at a point 6-feet from one end that this beam will safely carry.

(*b*) Hence calculate the shear at each of the points of support.

Answer.—See diagram.

$$R_A = \frac{W \times 12}{18} = \frac{2}{3} W$$

$$R_B = \frac{W \times 6}{18} = \frac{1}{3} W$$

Bending Moment at

$$C = M_C = R_A \times AC$$

$$= \frac{2}{3} W \times 6 \times 12 \text{ inch tons,}$$

$$= 48 \text{ W inch tons.}$$

$$\text{Moment of Resistance} = \overline{M} = r_0 \frac{I}{y}$$

where r_0 = limiting stress in tons per sq. in. = $7\frac{1}{2}$ tons/in.^{2}

I = moment of inertia = 375 ins.^{4}

y = distance from the neutral axis to the most stressed fibre of the section = 6 inches.

$$\overline{M} = \frac{1875}{4} \text{ inch tons.}$$

The Bending Moment is equal to the Moment of Resistance.

$$M = \overline{M}$$

$$\therefore 48 W = \frac{1875}{4}$$

$$W = 9{\cdot}75 \text{ tons.} \qquad (1)$$

$$R_A = \frac{2}{3} W = 6{\cdot}5 \text{ tons.} \qquad (2)$$

$$R_B = \frac{1}{3} W = 3{\cdot}25 \text{ tons.} \qquad (3)$$

Question 4.—Explain by any method you know, how you would calculate the safe load that can be carried by a steel stanchion of known section and height. Apply such method to calculate the safe axial load that can be carried by a 12 inch × 6 inch steel joist 20 feet high used as a stanchion, the ends being considered "fixed."

Answer.—The safe load which can be carried by a steel stanchion of known section and height is obtained by multiplying the sectional area by the limiting stress and making deductions which depend on the height of the column, the radius of gyration, and the method of fixing the ends.

Rankine's Formula for the design of columns and struts :—

$$p = \frac{f}{1 + \text{constant} \times \left(\frac{l}{r}\right)}$$

where p = safe load in tons per sq
f = crushing resistance i per square inch divid a factor of safety.
l = length of the colun inches, between the c of the bearings.
r = the least radius of gy

$$\text{constant} = \frac{1}{8000.}$$

The ratio of l to r depends method of fixing — thus :

pin-jointed ends, ratio $\frac{l}{r}$

fixed ends, ratio $\frac{l}{2r}$

Consider the 12-inch by 6-inch stanchion.

Sectional area = 16 sq. inches.
l = 240 inches.
f = (say) 6 tons per sq. inch.
ratio for fixed ends $\frac{l}{2r}$

Least radius of gyration r =

$$\sqrt{\frac{28}{16}} = 1{\cdot}32 \text{ inches.}$$

$$\text{then } p = \frac{6}{1 + \frac{1}{8000} \times \left(\frac{240}{2.64}\right)}$$

= 2.95 tons per square inch.
∴ total safe load = 2·95 × 16
= 47·2 tons.

Note that this column is a very " one, and while the result is theore correct, this column would rarely (if be used in practice.

Question 5.—A 12-inch by 6-inch stee and a solid steel column of $4\frac{1}{2}''$ dia have each the same sectional Each is to be used as a sta 16-feet high. All conditions equal, which will carry the g load, and why?

Under what conditions woul use the steel column in prefe to the joist?

Answer.—The strength of a colu dependent on the ratio of the height column to the least radius of gyr and the radius of gyration is depe on the ratio of the moment of inertia sectional area ; and since the lengt the sectional area are the same for sections, the radius of gyration (and fore the strength) will vary wit moment of inertia.

R. S. J. — least I = 28 inches^4

Solid column — I = $\frac{D^4}{64}$ = 20 in

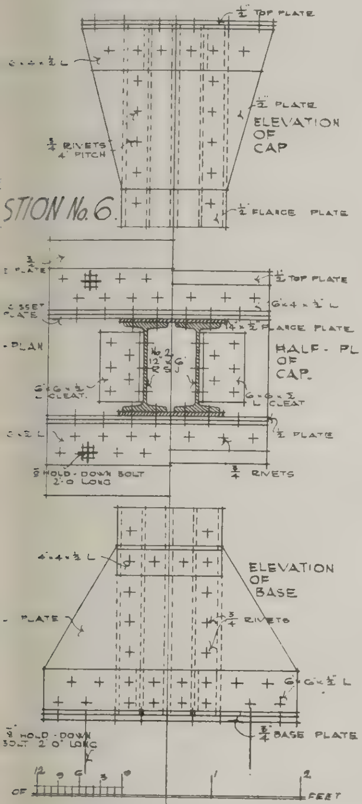
∴ the R. S. Joist will carry the g load.

Alternatively since for the R. S. $= \frac{d^2}{20}$ approximately, and for a solid co

$$r^2 = \frac{d^2}{16}$$

Where d is the least dimension o

on and r the radius of gyration, the
result is arrived at.
e solid sheet column would be prefer-
in shop fronts and inside shops, etc.
e space is of great value.
ion 6.—Draw to a scale of 1-inch to a
foot the cap and base of a "built-up"
stanchion composed of two 12-inch
by 6-inch steel joists with one 14-
nch by ½-inch plate on each flange.
swer.—See diagram.



on 7.—(*a*) Explain simply what is
neant by "eccentric loading."
(*b*) What is the effect of eccentric
oading on a stanchion.
(*c*) Describe how you would calcu-
ate for eccentric loading.
swer.—(*a*) When the point of appli-
of loading on a column does not act
ly over the vertical axis of the
n, the loading is known as "eccentric
g."
Eccentric loading causes a bending
in the column.
Calculate the bending moment due
ccentric load and equate to the
nt of resistance in the usual way.
esulting stress per square inch must
ded to the stress per square inch
the direct loading.

ELASTIC COTTAGES.

ns for elastic cottages for growing
es, designed by Professor Adshead,
erpool University, have been brought
the notice of the National Birth-rate
nission, and it is understood that the
vill shortly be translated into bricks
nortar on the Duchy of Cornwall
in South London. One of the plans
two adjoining cottages, with only
oor, which contain in all two living-
and six bedrooms and other acces-
The two cottages are shown with
vable fireproof partition, which
s them into two habitations with
bedrooms each, but the partition can
be adjusted to give four bedrooms to the one and two to the other, or five to the one and one to the other. The working of the scheme involves the careful selection of tenants, so that the one cottage may be occupied by a growing and the other by a diminishing family. For example, one of the cottages, with, say, only the living-room and the main bedroom, may be occupied by a newly married couple, while the companion cottage may be occupied by a family with growing-up children likely soon to leave the parental roof. In such circumstances, the partition and the rents could easily be adjusted to suit the diminution of the one family and the increase of the other.

NEWS ITEMS.

An Appointment.

Mr. F. Coutts Webster, A.R.I.B.A., P.A.S.I., has been appointed assistant architect to the Board of Control. Over 400 applications for the post were received.

Change of Address.

Mr. Ernest G. Theakston, F.R.I.B.A., has removed to "Wendover, Bucks" (Station—Wendover, G.C.R.). London address as before—36, King Street, London, E.C. Tel. 1167 Central.

A Royal Appointment.

Messrs. Escaré and Denelle, Ltd., of 129, Wardour Street, London, W., have recently been honoured with the Royal Warrant of appointment as manufacturers of electrical fittings and bronzes to His Majesty King George V.

Worthing Pier Reconstructed.

The reconstructed portion of Worthing Pier, which was wrecked during heavy gales at Easter, 1913, has been finally connected up with the isolated pavilion and landing-stage. The new pier is stronger and wider in order to permit the erection in the future of a pavilion at the shore end, and also the provision of a bandstand about midway down the structure.

Electric Light Direct from Coal.

An invention on which a German engineer, Johannes Marschall, of Dresden, has been working for some years past holds out the prospect that householders will be able to obtain electric light for their houses without the intervention of a central power station, by means of an apparatus which will merely require to be supplied with coal like an ordinary stove. The patent rights of the apparatus are in the hands of the Walker-Shaw Syndicate, 28, St. James's Square, S.W.

Amalgamation of Businesses.

It is announced that Messrs. Spital and Clark, of Birmingham, have joined their business with that of Messrs. J. W. Singer and Sons, Ltd., of Frome and London. The amalgamated firm will be under the joint managing-directorship of Mr. Herbert Singer and Mr. Ernest Spital, and Mr. Clifford Spital joins the directorate as works manager. The works at Frome are being enlarged for the accommodation of Messrs. Spital and Clark, who will shortly transfer the whole of their staff, plant, and models.

Co-operative Housing in France.

By erecting a large building containing seventy tenements for occupation by its members, the Co-operative Society of St. Claude, in the Jura, has initiated a form of co-operative enterprise new to France. Each of the tenements consists of three rooms and a kitchen; the rent charged will be from 5s. to 6s. a week. The building is thoroughly up-to-date, with gas and electricity, a laundry and drying room, and proper sanitary arrangements. The ground floor will be occupied by a branch of the Co-operative Society. The cost is £16,000, and this has been provided out of the funds of the society and the savings of its members.

Leys School Extension Building.

The King visited Cambridge last Thursday to inaugurate a new building at the Leys School. His Majesty, on the invitation of Sir Aston Webb, the architect of the extension, placed in position the top stone of the new building by opening a small door with a gold key ring, this action releasing cord and allowing the top stone to fall into its place. The extension completes the fourth side of the quadrangle. On the other side of the quadrangle is an open cloister of five arches, giving entrance to the class rooms on the ground floor. The upper floor is devoted almost entirely to the library.

Clifford's Inn to be Sold.

What is described as "the remaining portion" of Clifford's Inn will shortly form the subject of an auction to be held by Messrs. Edwin Fox, Burnett, and Baddeley. The Inn, which is situated behind St. Dunstan's Church, Fleet Street, bears many distinguished names upon its records, including those of Sir Edward Coke and Selden, also Harrison, one of the judges at the trial of Charles I., and it was in this old hall that Sir Matthew Hale and his fellow-judges sat to determine questions arising between landlord and tenant consequent upon the Great Fire. Eleven years ago the Inn, as then existing, formed the subject of an auction at the Mart, which was rather remarkable from the fact that a sale was effected to one bold opening bid of £100,000 made by Mr. Willett, the well-known builder. Since then portions of the property have been resold and built upon, and that which now remains for disposal comprises an area of about 16,500 ft., adjoining the Record Office and close to the Law Courts.

Textile Mill Built in Twelve Days.

A notable piece of work—that of rebuilding a cogging and finishing mill at the works of the Aachener Hüttenverein, at Rothe Erde, near Aix-la-Chapelle—has recently been accomplished. The work included the dismantling of an old cogging mill, with engine having a roll diameter of 40 in., and a slab length of 8 ft. 3 in., and replacing it with a new mill having 45-in. rolls and a slab length of 9 ft., a new driving engine, and electrically operated auxiliary gear, the new engine being fixed 55 ft. further away from the shears than the old one. At the same time, the finishing mill, which has 26-in. rolls and is behind the cogging mill, was provided with a new base-plate and enclosed, interchangeable housings. It should be added that it was found possible to erect the new engine and also to commence the construction of the foundation and the erection of the base plate while the old mill was still in operation, as the train was supported on a wrought-iron frame, which could be dug below and under-pinned. The remainder of the work was, however, carried through in twelve days, and that by the aid of only the old crane used in connection with the mill.

SPECIAL LEGAL REPORTS.

Devonport Light and Air Dispute: Diffused Light.

Coombes v. Tozer.

April 22. King's Bench Division. Before Mr. Justice Lawrence.

This case came before his lordship for argument from the Exeter Assizes. The plaintiff was Mrs. Elizabeth Coombes, the widow of Mr. Coombes, maker of nautical instruments and photographer, Princes Street, Devonport, and the defendant Alderman J. C. Tozer, a draper, and ex-Mayor of Devonport. The plaintiff brought her action against the defendant for an injunction restraining the defendant from making any alteration to his premises or rebuilding them in such a way as was calculated to obstruct the ancient lights enjoyed by the plaintiff, and alternatively there had been entered a claim for damages.

Mr. J. A. Foote, K.C., and Mr. Jowatt were counsel for the plaintiff, and Mr. J. A. Hawke, K.C., and Mr. Dummett represented the defendant.

The facts of the case (all the evidence having been heard at Exeter and the case only adjourned to the High Court for the hearing of counsel's speeches and the delivery of judgment) were that the defendant purchased three houses in Princes Street in the year 1913, and altered them for the enlargement of his business premises. He pulled them down and erected upon the sites the buildings of which complaint was now made. Before these works were executed the houses did not go back to the plaintiff's land, but now it was said they went right back to that boundary, and the result was that the light to the plaintiff's premises was so interfered with as to seriously affect the business of the plaintiff.

It was contended for the defence that there was no serious diminution in the flow of light and air to the plaintiff's windows.

Mr. J. A. Hawke, K.C., addressing the Court on behalf of the defendant, said that the case had now practically resolved itself into this—that no claim was left in respect of direct interference with the light from the windows. Mr. Foote had stated at the trial that he attached so little importance to direct light that he would say nothing about it. It was conceded that one could not from any of the windows for which the claim was made see the defendant's new building. He did not know whether the judge had ever met with such a case before, but he (counsel) in his more limited experience had never done so. This was a claim in respect of buildings that were erected at the back of the plaintiff's premises, behind the outlook of the windows for which the claim was being made. It was therefore a case of diffused light altogether and not of reflected light, because it was impossible to get from this alleged obstruction any reflected light into some of the windows. He knew of no such claim thus based on diffused light ever being made. The building could not cut off the sunshine from the plaintiff's windows. They had got a case here in which there was no lateral obstruction either, and the Courts had said that "a lateral obstruction might amount to a nuisance."

It was necessary, he contended, to produce stronger evidence in a case of lateral obstruction than in the case of direct obstruction, and here there was neither lateral nor direct obstruction. It was only a question of diffused light, and he would submit that no Court could hold that that was an obstruction. Having regard to the experiments that had been made, he submitted it was not an interference of which anybody could complain who brought to the consideration of it an even mind. He would submit that if there was sufficient light for ordinary purposes, not extraordinary purposes, the law would not interfere. The law would not interfere merely because there was something that gave a little trouble or even annoyance.

Mr. Foote, on behalf of the plaintiff, contended that in this case there was an undoubted interference with the light. He characterised the erection of the defendant's building as an outrageous thing to plant and own near the plaintiff and one which made the state of things which was already bad worse. The state of affairs was already at a point when the slightest diminution of light would be more serious than it would have been to a well-lighted building.

Mr. Justice Lawrence, in giving judgment, said the case had given him considerable anxiety. With regard to the upper workshop, he was satisfied that there had been interference with the light and air, but there was not such interference with the light as amounted to a nuisance. Mere interference was not sufficient, and if the workshop was a good workshop still, you could not say that it was suffering from a nuisance. He thought it was a good workshop now and therefore on that part of the case he decided in favour of the defendant. In regard to the lower workshop, there was interference with both light and air that did amount to a nuisance. There was interference with the circulation of air in the courtyard and interference with the light in the lower workshop. The house is less healthy to live in and the workshop a less admirable workshop to work in. In view of these findings, it was difficult to apportion the damages, but it seemed to him to be reasonable to reduce the amount of £200 that was suggested to £150. He thought if the defendant had been asked when he was about to put up his building if he would give £150 to build as he wished to and hear no more about it he would readily have accepted the offer. He therefore gave judgment for the plaintiff for £150 damages and costs.

Mr. Hawke suggested that as the defendant had won a material part of the case there should be a direction as to costs, but the judge said that under the circumstances he could not do this. He thought the claim of £200 was a very moderate one.

Mr. Hawke asked for a stay of execution and this was declined.

Building Agreement Dispute.

Harris v. Holloway Bros.

April 22. Chancery Division. Before Mr. Justice Astbury.

A building agreement made between Mr. Harris, builder, and Messrs. Holloway Bros., of London, builders, came before his lordship for construction, Mr. Harris alleging that under it he was the mortgagor of certain property and entitled to redeem. The defendants denied the existence of any mortgage.

It appeared from the opening of Mr. Lavington, who appeared for the plaintiff,
that in December, 1901, Mr.
entered into an agreement with Hol
Bros. with reference to the building
number of houses on an estate whic
latter were developing at Earl
Wandsworth. Mr. Harris und
within a given time to erect eigh
houses on the defendants' land, an
defendants agreed to advance su
money to the extent of three-quart
the cost of their erection. As the
were completed Harris was to ta
leases of them from the defendants
the interest thus obtained by Harri
to be charged to the extent of the
advanced by the defendants. Ther
a power of re-entry on breach of any
of the contract, which breach was to
nate the agreement. The defendan
vanced a sum of about £20,000, a
May, 1903, they took possession, all
breaches of contract by Harris.
proceedings ensued in 1904, and
mately a receiver of the property w
pointed by consent. Mr. Harris
took up any of the leases, and Hol
Bros. had been in undisputed poss
of the estate since 1905, receivin
rents. Plaintiff now claimed an ac
of the rents received on the groun
he was a mortgagor of the estate an
the defendants had recouped them
to a very large extent, out of these
for the sums advanced.

Mr. Russell, K.C., for the defen
submitted that there never was any
rest in the estate vested in Harris
he could mortgage. When the bre
of agreement occurred the agre
came to an end and the defendants
possession of their own property.

His Lordship said that he held the
of the agreement to be this: The pl
was given license to enter upon the
dants' property for the purpose of bu
houses under an agreement by whic
defendants were prepared to advanc
tain sums of money to enable him
so. The plaintiff was also to ta
leases of the houses as built, under
his obligations as to rents, etc., to
the defendants would be properly de
If the plaintiff failed to do this, the
perty remained in the landlords, oth
the interest obtained by the plainti
to be charged with the sums adv
All there was here was an agreement
might ripen into a mortgage, but
could be put an end to in certain
which happened in this case. For
years no claim had been put forwar
anything in the nature of a mortgag
sisted, and he was of opinion tha
claim must be dismissed with costs.

Darwen Builder and the Corporat

Knowles v. Mayor, etc., of Dar

April 23. King's Bench Division. Before
Darling, Avory, and Rowlatt.

This was an appeal by the Mayor
of Darwen against a decision o
Quarter Sessions at Preston quash
conviction by the Darwen Justices a
John Knowles, a builder, of Darwe
an offence under the Darwen Corpo
Acts, 1873 to 1877.

It appeared that Mr. Knowles
alleged to have commenced the er
of two houses in a new street at D
without having indicated with stones
tervals, or in some other approved
ner, the whole length of the street.

:. Knowles successfully appealed to
Quarter Sessions, contending that the
;ation to define the new street rested
ie owner of the land. Mr. Sutton, for
Corporation, submitted that the
ler had contravened the Act in build-
without indicating the course of the
t as required.

·. Mackenzie, in reply to Mr. Knowles,
tained that the Quarter Sessions were
in entertaining the view that the
;ation rested on the owner of the land
igh which the street was made.

ie Court allowed the appeal and set
the decision of the Quarter Sessions,
ng that the conviction must stand.

·. Justice Darling remarked that one
l find possible reasons for deciding
iatter either way.

e appeal was allowed without any
· as to costs, and the order of the
ter Sessions was quashed.

COMPETITIONS.

useum and Art Gallery, Belfast.

ie design submitted by Mr. James
nes, of Edinburgh, has been awarded
place in the above competition. The
iums have been allocated as follows:
, Mr. Richard Gunn, of Glasgow;
Messrs. Wright and Wylie, of Glas-
£50. Mr. T. S. Lawson, of Bedford
, London. Dr. J. J. Burnet was the
sor. The building is to cost £75,000.

ing Edward School, Gateshead.

teshead Education Committee have
ed to invite competitive designs for
roposed King Edward School.

*roctor Travelling Studentship,
Manchester.*

ie Proctor travelling studentship,
to all students of the Manchester
ol of Art, has this year been awarded
r. Gordon Hemm for architecture.

Technical Institute, Coventry.

e sketch plans of Mr. A. W. Hoare,
oventry, have been provisionally ac-
d in the competition for a new muni-
technical institute to be erected, at
stimated cost of £24,500, in Pool
low, Coventry.

*ieap Housing, Paris—Third and
Fourth Competitions.*

e third of the series of competitions
iised by the city of Paris with the
t of procuring good designs for cheap
es to be erected in various quarters of
ty or its suburbs, refers to sites in the
de la Fontaine-à-Mulard and Brillat
in, and has been decided as follows:
,000 fr.), MM. Arfvidson and Bassom-
e-Sewrin; 2nd (5,000 fr.), MM.
ain Mercié and Bernard; 3rd
fr.), MM. Albenque and Gonnot;
3,000 fr.) MM. Coste and Gallet.

e awards of the jury in the fourth of
series of competitions—that which
to the Passage Vignon site—are
unced as follows: 1st (8,000 fr., or
iission), M. Alexandre Maistrasse;
5,000 fr.) MM. Joseph Charlet and
ne Perrin; 3rd (4,000 fr.), MM. Jean
er and Louis Bernard; 4th (3,000 fr.),
e Rigaud.

*xtension, Royal Naval College,
Dartmouth.*

oposed extensions to the Royal Naval
ge at Dartmouth are to include the
sion of seamen's barracks. The
expenditure proposed is £90,000.

PROJECTED NEW WORKS.

School Extension, Dunfermline.

Crossgates Public School, Dunfermline, is to be extended at an estimated cost of £4,000.

Fire Station, Woodford.

Woodford Urban Council have decided to erect a new chief fire station, with officers' quarters, at a cost of £820.

Clock Tower, Brighouse.

The Mayor of Brighouse has promised to erect and present to the town a clock tower on a site almost opposite the public offices.

Chapel, Tamworth.

Tamworth Town Council have approved plans of a chapel, proposed to be erected at the cemetery, at an estimated cost of £1,000.

Parish Council Offices, Ardrossan.

Ardrossan Parish Council propose erecting new central Parish Council Offices on a site near Stanley Burn, Ardrossan.

Public Hall and Offices, Kilbirnie.

The Kilbirnie Parish Council have appointed Mr. R. J. Armour, Kilmarnock, measurer for the erection of their new public hall and offices.

Sea Front Improvements, Clacton.

Clacton Urban Council are improving the sea front at a cost of £20,000. The improvements will include a sheltered bandstand and colonnade.

American Church, Kingsway.

It is proposed to build in Kingsway an American church, club, and institute as a memorial of a century of peace between Great Britain and the United States.

Police Station, Windermere.

Plans for the erection of a new police station at Windermere at a cost of £4,000 have been approved at a meeting of the Westmorland Standing Joint Committee.

Open-Air Baths, Bradford.

The Baths Committee of Bradford Corporation have approved plans and estimates for proposed open-air baths in Lister Park. The cost is etimated at about £5,000.

Asylum, Swansea.

The joint Swansea-Merthyr asylum, to be built at Swansea, is estimated to cost about £200,000. The building will take some five years to complete.

Municipal Buildings, Stepney.

Stepney Borough Council have secured the option to purchase for £11,000 from the Mercers' Company a site in Arbour Square, upon which to erect municipal buildings.

Infirmary, Bromley.

A report with reference to a scheme for the erection of a new infirmary at an estimated cost of about £40,000 has been adopted by the Bromley Board of Guardians.

Public Gardens, St. Anne's-on-Sea.

Lord Ashton has provided about £24,000 to be expended on the laying out of public gardens at St. Anne's-on-Sea. The Council have decided to spend £7,000 of this on the erection of a pavilion in the gardens.

Warehouse, Glasgow.

A new warehouse is to be erected at the corner of Hope Street and Sauchiehall Street, Glasgow, for Messrs. J. and A. Watt at a cost of between £30,000 and £40,000. The architect is Mr. A. T. Heathcote, Market Street, Manchester.

Conveniences, Glasgow.

The Glasgow Corporation propose to erect urinals at the following tramway termini: Anniesland, Dalmuir, Jordanhill, Shettleston, and Tollcross, and a waiting-room and convenience at the Battlefield terminus.

Picture Palace, Huddersfield.

Huddersfield County Borough Council Highways Committee have conditionally approved of plans for a new picture palace at the corner of John William Street and Brook Street for the Huddersfield Cinema Co., Ltd.

Factory, Dundee.

Plans have just been passed by the Dundee Dean of Guild Court for the erection of a new factory in Old Glamis Road for the Alpargatas (Powers Patent), Ltd., at a cost of about £6,000. The architects are Messrs. Maclaren, Sons, and Soutar, Dundee.

Proposed New Street, City of London.

The London Society is approaching the City Corporation with a view to reopening the question of constructing a new street from Cheapside to Liverpool Street. They recommend a conference with the London County Council, and are anxious that the rebuilding of the old General Post Office should allow for the new street.

Churches, Birmingham.

The sum of £5,000 has been raised towards the required £8,400 for the building of a new church—St. Germain's—at the junction of City Road and Portland Road. This new church is expected to be completed in two years. The foundation-stone laying ceremony will take place in the summer. Ten additional churches in the See of Birmingham are contemplated in a scheme which is being promoted by the Bishop.

Municipal Buildings, Stepney.

The Finance and Parliamentary Committee of the Stepney Borough Council recommend the affixing of the seal of the council to an option to purchase a site for municipal buildings on the north side of Arbour Square, from the Mercers' Company, for £11,000. The committee further recommend that provision should be made, in any scheme submitted, not only for municipal buildings, but also for the erection of a town hall for the borough.

Civic Buildings, Denbigh.

At a meeting of the Denbigh Town Council, last week, it was reported that the Local Government Board had approved the scheme for the new market, public hall, fire brigade station, and offices, and given the Council sanction to borrow £10,000 for the purpose. The board also intimated their willingness to grant a further loan if required. The Council decided to proceed with the work as soon as possible, and to ask for an additional loan of £2,500.

Miscellaneous Works, Hornsey.

The following proposals, with others for minor works, have been approved by the Plans Committee of Hornsey Town Council: Drainage connections for four dwelling-houses in Hornsey Lane, Highgate, by Edmondsons, Ltd.; drainage for additions to St. Augustine's Church, Highgate, by Mr. H. Gibbons; conversion of two dwelling-houses each into two separate tenements, Nos. 5 and 7, The Grove, Muswell Hill, submitted by the Imperial Property Investment Company; amended plan for the building line in Hermiston, Keller, and Elmfield Avenues, on the Elm

House Estate, Hornsey, by Messrs. Francis Chambers and Son, of Cannon Street; six dwelling-houses in Hermiston Avenue, Hornsey, by Messrs. Francis Chambers and Son; garage in yard at the rear of "Avenue House," Priory Road, Hornsey, by Mr. John Farrer; amended plans for dwelling-house in Stormont Road, Highgate, by J. Bronsdon and Son; drainage for two dwelling-houses in Woodside Avenue, Muswell Hill, by the Metropolitan Water Board; dwelling-house in Linden Road, Muswell Hill, by Messrs. W. J. Kemp and W. M. How; motor garage at "Deerhaddnn," Shepherd's Hill, Highgate, by Messrs. Stevens and Sons; and plans for dwelling-house in Causton Road, Highgate, by Messrs. Fedrick Brothers, Ltd.

London.

Subject to compliance with certain specified conditions, consent has been given by the L.C.C. to the execution of the following works:

Bow and Bromley.—One-storey buildings on north-eastern side of Sharman Street, Poplar, at Storeyard of Royal National Lifeboat Institution, on the application of A. W. Lewis, on behalf of the Royal National Lifeboat Institution.

Brixton.—Addition at the rear of 66a, Brixton Road, Brixton, on the application of F. Bethell, on behalf of W. A. Schmidt.

Building to abut upon Brixton Road, Stockwell Road, Stockwell Avenue, and Pilcher place, Brixton, on the application of H. Knight, on behalf of Quin and Axtens.

City.—Uniting of 6 and 8-10, Aldermanbury Avenue, on the application of G. R. Julian.

Clapham. — Bay-windows, porches, bargeboards, and sham half-timbered gables to four houses on the southern side of Nightingale Lane, and twenty-nine houses on the western side of Badminton Road, Clapham, and the erection of four houses in Nightingale Lane, on the application of Chapple and Utting.

Deptford.—Building on the western side of High Street, Deptford, on the application of P. Leeds, on behalf of Rev. R. P. Roseveare.

Finsbury, East.—Uniting 9 to 27, Old Street, erection of additional storey, and construction of roofs at a greater angle than 47 degrees, on the application of H. O. Ellis and Clarke.

Holborn.—Uniting two factory buildings on the southern side of Baldwin's Place, Gray's Inn Road, on the application of L. Solomon and Son, on behalf of Sage and Co.

Hoxton.—Additional cubical extent in respect of a garage in Shoreditch High Street, on the application of W. Stewart.

Islington, West. — One-storey motor-house at the rear of 391, Holloway Road, Islington, on the application of E. C. Arter, on behalf of H. J. Allen.

Kensington, South.—Projecting porch at 7, Cornwall Gardens stables, additional storey thereto, on the application of Stanley, Barrett, and Driver.

Alterations at 179 and 181, Brompton Road, Kensington, on the application of L. C. Rosevear.

Lewisham.—House on eastern side of Tannsfield Road, Lewisham, on the application of W. Frampton.

Building at 94, Brownhill Road, Catford, on the application of A .E. Thomas, on behalf of Dr. G. P. Y. Hulbert.

Addition at the rear of 144a, High Street, Lewisham, on the application of Champion and Son.

House at the corner of Thorpewood Avenue and Sydenham Hill Road, Lewisham, on the application of E. M. Penman, on behalf of Miss C. D. Cooke.

House on the south-west side of Forest Hill Road, Lewisham, on the application of F. G. Grierson, on behalf of A. H. Trenchard and G. H. Withers.

Porches and bay-windows to houses on both sides of Gordonbrock Road and northern side of Chudleigh Road, Lewisham, on the application of W. Heath and Sons.

Marylebone, East.—Buildings abutting upon Melcombe Place and Balcombe Street, St. Marylebone, on the application of A. Dawkins, on behalf of A. T. Coucher.

Building abutting on Great Portland Street, Marylebone, on the application of E. F. Tomlins, on behalf of G. Paxton.

Building on site of 17, Avenue Road, Marylebone, on the anplication of A. F. Faulkner, on behalf of H. G. Tetley.

Marylebone, West.—Block of flats upon a site abutting upon Seymour Place, Nutford Place, Brown Street and Queen Street, St. Marylebone, on the applications of A. Davis and F. W. Hunt.

Norwood.—Motor garage at "The Croft," Knollys Road, Streatham, on the application of F. E. Laceby.

Paddington, North.—Addition at the rear of 399, Harrow Road, Paddington, on the application of M. P. Shields.

Paddington South.—Addition at rear of 32, Hyde Park Gardens, Paddington, on the application of Farrow and Turner, on behalf of L. Franklyn.

St. Pancras, East.—Extension of King's Road power house, St. Pancras, on the application of S. Baynes, on behalf of St. Pancras Metropolitan Borough Council.

St. George, Hanover Square.—Oriel windows at 17, Park Lane, on the application of G. Thrale Jell.

Uniting 50 and 51a, Conduit Street, St. George's Hanover Square, on the application of E. Keynes Purchase, on behalf of L. Harris.

Southwark, West.—Alterations at the electricity sub-station, Vine Yard, Southwark, on the application of Jenkinson, Brinsley and Jenkinson, on behalf of the County of London Electric Supply Co., Ltd.

Building on the northern side of Great Charlotte Street, Southwark, on the application of W. A. Pite, on behalf of the trustees of the Blackfriars Skin Hospital.

Woolwich.—Projecting one-storey shop in front of 43, Lakedale Road, Plumstead, on the application of R. S. Dynes, on behalf of A. Mair.

Porches and bay-windows to 71 to 105 (odd Nos. only), McLeod Road, Abbey Wood, on the application of A. H. Durnford, on behalf of the Royal Arsenal Co-operative Society, Ltd.

New Church, Golder's Green.

His Eminence Cardinal Bourne has laid the foundation stone of a new Roman Catholic Church, which will cost £7,000, in Finchley Road, midway between Golder's Green and the Hampstead Garden Suburb.

OBITUARY.

Mr. Alexander Hale.

The death occurred from choler
March 30, at his residence in Be
India, of Mr. Alexander Hale, who
member of the Institute of Civil Engi
(Ireland), member of the Royal San
Institute, member (Associate) of the
tute of Municipal and County Engin
and Fellow of the Institute of San
Engineers. The last thirty years o
life were spent in India in the interes
civil and sanitary engineering—firs
Simla (Punjab) and then in Howrah,
gal. Of this latter town he rose
chief engineer and also assessor to
municipality. His death, at the co
ratively early age of fifty-seven
came at a time when the town was
tically and generally free from infec
He was within twelve months of r
ment from a life which had been st
ously devoted to the interests of the
neering profession.

TRADE AND CRAFT

Waterproofing Schools.

"Pudlo" is being incorporated wit
cement work on the Bilton Council sc
now in course of erection.

A Removal.

Messrs. J. E. and S. Spencer have
new offices at 16, Dowgate Hill, Lo
E.C. The warehouse is at 33, Do
Hill.

Additions to Territorial Quarte

Alterations and additions are
carried out for the Territorial Associ
at the 22nd Battalion's Quarters, Ja
Road, Bermondsey, S.E., by Messrs.
Roome and Co., under the supervisi
Mr. Gerald C. Horsley, F.R.I.B.A.

A Pamphlet on "Ceresit."

A neat pamphlet, dealing with
National Physical Laboratory's te
"Ceresit," and reproducing a large
ber of testimonials from "Ceresit"
has been issued by the British C
Waterproofing Company, Ltd., of 100
toria Street, Westminster, who wi
pleased to send a copy to anyone on
cation.

Waygood and Otis Amalgamatio

It is announced that the directo
Messrs. R. Waygood and Co., Ltd.,
entered into an agreement to acquir
entire interest of the Otis Elevator
of New Jersey, U.S.A., in the Otis E
tor Co., Ltd., of London. An extra
nary general meeting of Waygood an
will be held on Friday next to appro
agreement.

London and Midland Insur Company's Annual Report.

The annual report and accounts o
London and Midland Insurance
pany, Ltd., just issued, show that the
premium income in all departments,
deducting reinsurances, amounted
£238,407 14s. 11d., and the interes
ceived to £5,736 9s. 1d., making a
income from all sources of £244,14
The payments under policies
£134,619 3s. 9d., or 56.4 per cent. o
net premium income, and commission
expenses amount to £94,847 17s. 4d
39.7 per cent. The loss ratio, inclu
full provision for outstanding claim
62.8 per cent.

THE KAHN SYSTEM of
REINFORCED CONCRETE
THE TRUSSED CONCRETE STEEL CO., LTD.

An Example of
Modern Factory Construction.

NEW MOTOR CAR WORKS for Messrs. Arrol Johnston, Ltd., Dumfries.

This is an example of a Frame Building designed throughout on the Kahn System.

The entire building is in Reinforced Concrete, except the wall panels, which are built of red brick. The building occupies an area of about 310 ft. by 310 ft.

THE TRUSSED CONCRETE STEEL CO., LTD.,
52, CAXTON HOUSE, WESTMINSTER, S.W.

N.B.—The T.C.S.C. will be glad to collaborate with Architects on any construction, and place at their disposal the skill and experience of their Engineering Staff, and invite enquiries for their Handbook and Literature.

THE BOMBAY MEMORIAL SCHEME.

Plans have been exhibited of the amended scheme for a pavilion with approaches and an appropriate setting on the Apollo Pier to commemorate the landing there of the King and Queen when they went to India for the Durbar two years ago. A reclamation of 7,700 yards from the harbour, with a projecting mole, will be made, and the result will be a great improvement of the pier as a place of landing and of public resort. The scheme provides a commanding site for the pavilion, which is designed on broad monumental lines. It will have a grand central hall 85 ft. high, with two flanking pavilions, the whole capable of accommodating 600 people on ceremonial occasions. The design is by Mr. G. Wittet, consulting architect to the Government. It is Indian in character, and based on work done in Western India in the fourteenth and fifteenth centuries. A strong and bold outline is preserved to mark the building from the seaward approach, while interest and value are obtained at close quarters from the intricate and beautiful detail employed by the old builders of Gujarat.

TECHNICAL EDUCATION AT THE GARDEN SUBURBS.

The development of building estates by societies federated with the central body of co-partnership tenants enables technical education to be encouraged along systematic lines. Every winter the Co-partnership Tenants' Housing Council pays the fees of workmen engaged in erecting houses on its garden suburbs who attend classes at public institutions. Mess-room classes are also organised in practical plumbing.

On the Hampstead Garden Suburb a step further has just been taken, and Mr. Len. Godfrey has been appointed instructor of workmen's classes held on the jobs where the men are actually at work. A specimen lesson has just been given to about fifty of the workmen who assembled under the chairmanship of Mr. G. L. Sutcliffe, F.R.I.B.A., to learn the value of the steel square in connection with roofing and to see demonstrations of geometrical problems by means of specially prepared models.

At the conclusion of the lesson Mr. Henry Vivian, the chairman of the Hampstead Tenants' Societies, pointed out how scientific precision would have to take the place of the old rule-of-thumb method of building.

ROMAN REMAINS AT COMPTON AND GLOUCESTER.

During excavations in a trench in the orchard at Limnerslease, Compton, the residence of Mrs. G. F. Watts, widow of the Royal Academician, foundations of Bargate stone with pink mortar characteristic of Roman building have been discovered. Mr. Ralph Nevill, F.S.A., who has visited the spot, has no doubt that part of a Roman villa has been found. Mrs. Watts has in her possession a piece of a bronze vessel with beautiful patina which had previously been discovered not far from the site. A square of Roman pavement with 16½-ft. dimensions, discovered in the course of building operations in Northgate Street, Gloucester, is dec by Canon Bazely, president of the cestershire Archæological Society, one of the finest pieces of pavement i country. Except for a corner dest during a former excavation, the pa has been defaced in only a few patches. It is pronounced to be seco third century work. The pattern is w in natural stone mosaic, blue lias, flint, and red brick being used.

NEW TERRITORIAL HEADQUART NEATH.

New Territorial headquarters at have been erected at the junction of Road and Rugby Avenue, and cons three separate blocks of buildings caretaker's house and out offices, tog with a drill yard having a length of with a width of 47 ft., the floor being with wood blocks. On one side of the square or yard is the miniature rifle having a length of 90 ft. This repre an actual landscape in relief, with mo troops and figures, etc., all construct scale in harmony with the range o rifle, so that all allowances may be a rect as if on the actual battlefield. buildings are constructed of red brick Bath stone dressings to the entrance, the exception of the caretaker's qua which are roughcast. The roofs covered with slates. The premises a by electric light. The general contra are Messrs. D. Davies and Sons, of Ca and the buildings were designed by carried out under the superintenden Lieut.-Colonel Mansel H. Hunter Neath, at a cost of about £6,000.

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ERECTED WITHOUT
CENTERING.

NEW WAREHOUSE, BIRMINGHAM.
View looking up through staircase well, showing the construction.

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SOUNDPROOF - - -
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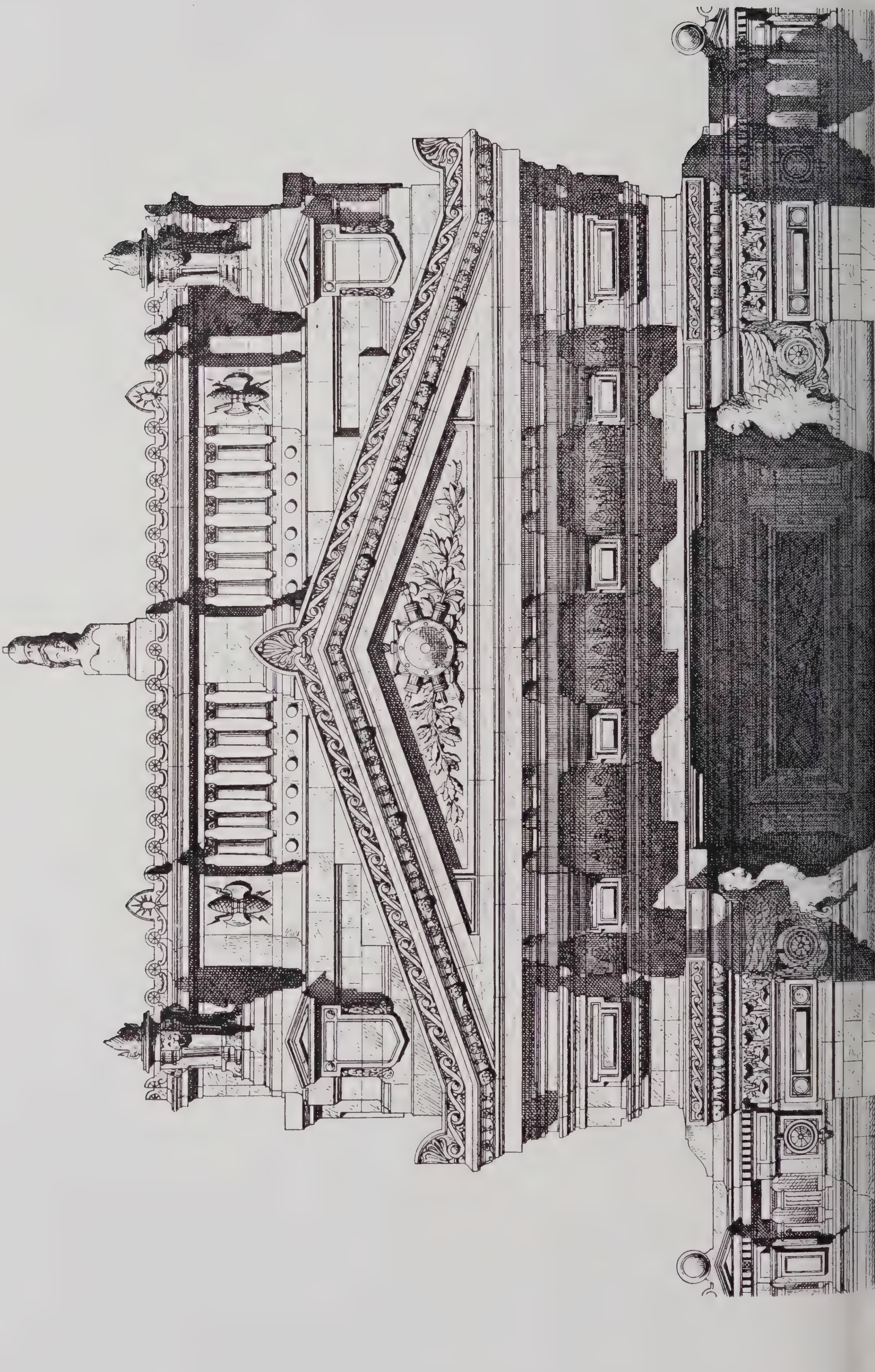
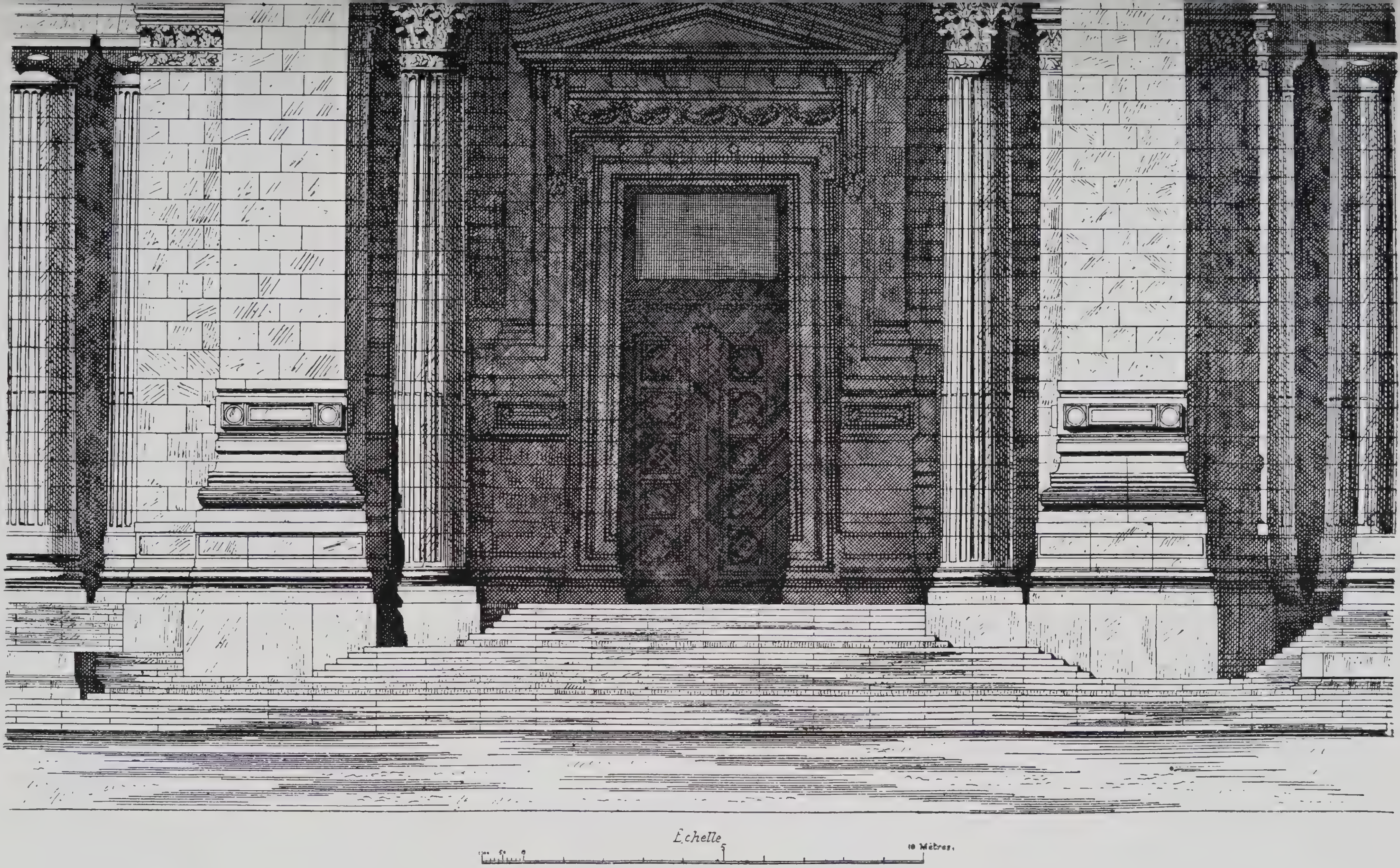
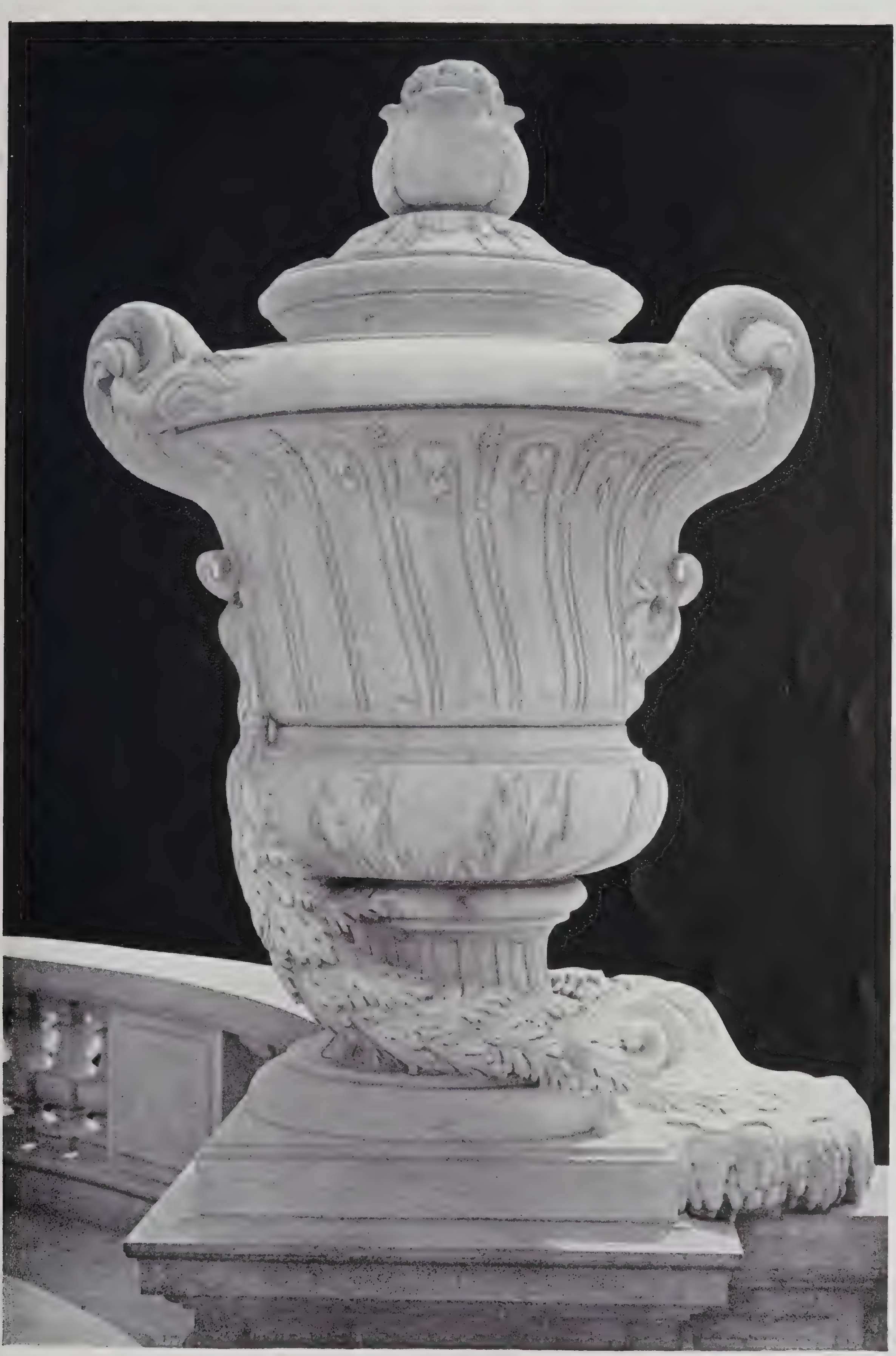
[illegible] Butler





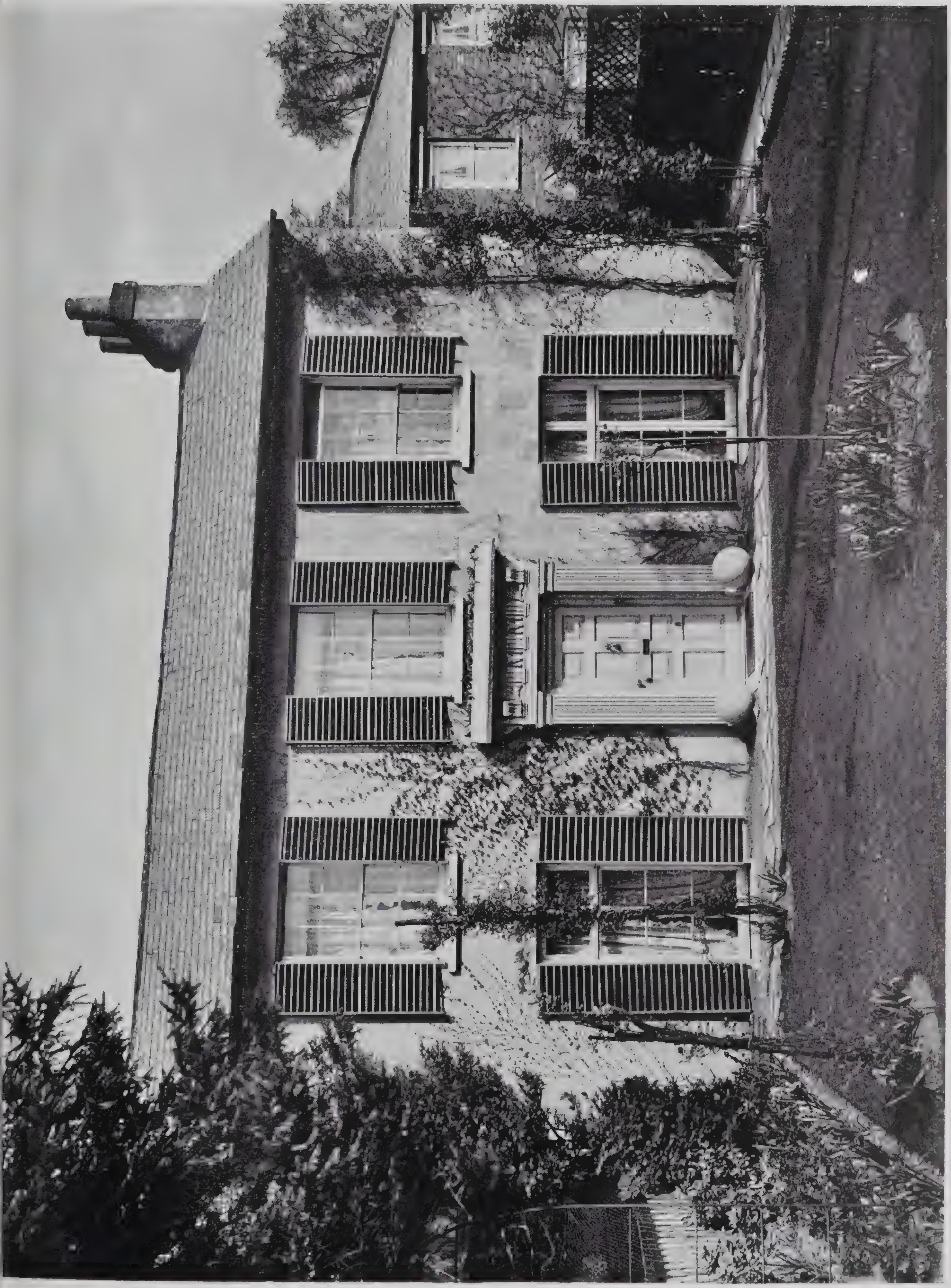
THE PALAIS DE JUSTICE, BRUSSELS. III.—DETAIL OF MAIN ENTRANCE.

J. POELAERT, ARCHITECT.

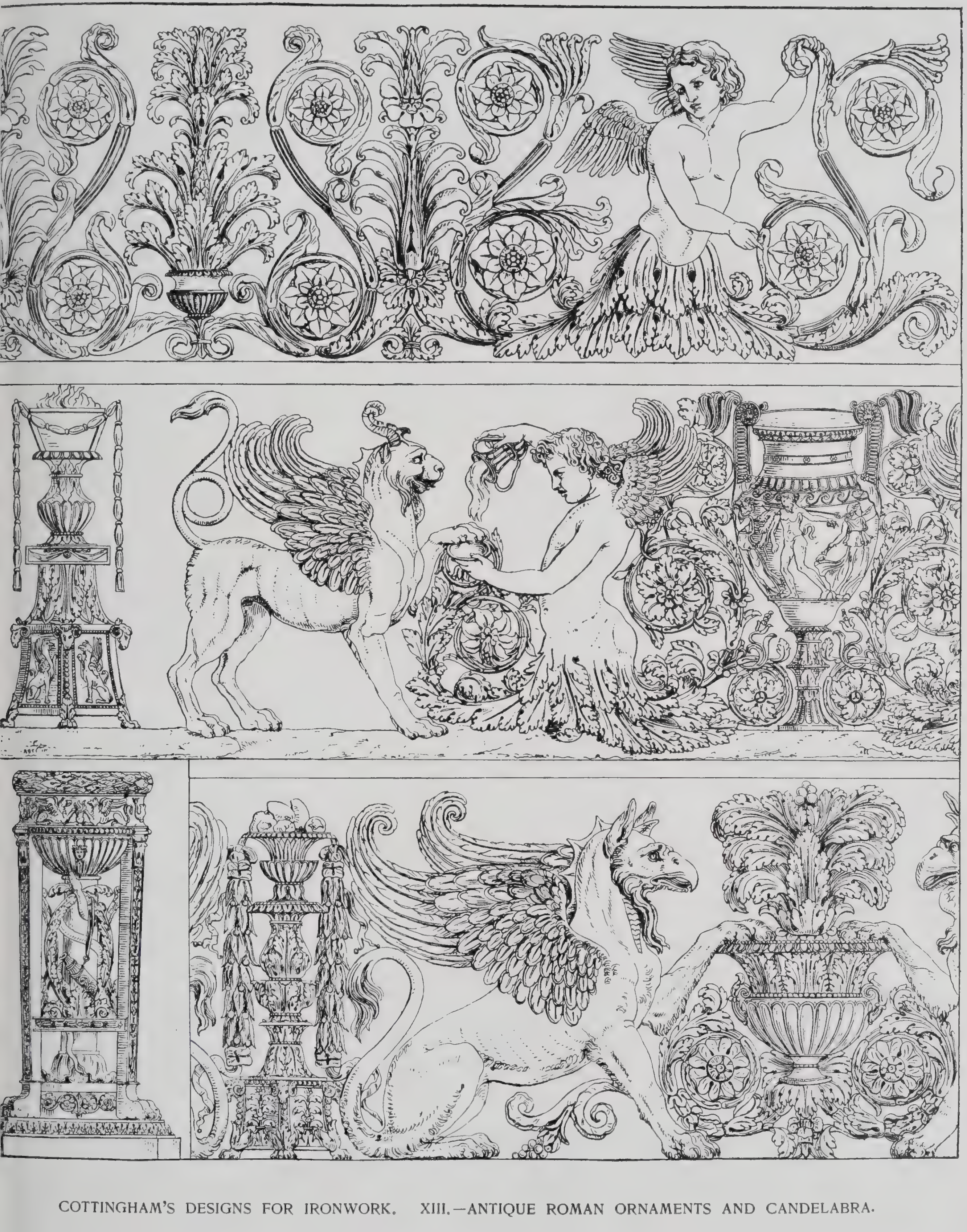


VASES. II.—MARBLE VASE ON PONT ALEXANDRE III., PARIS.

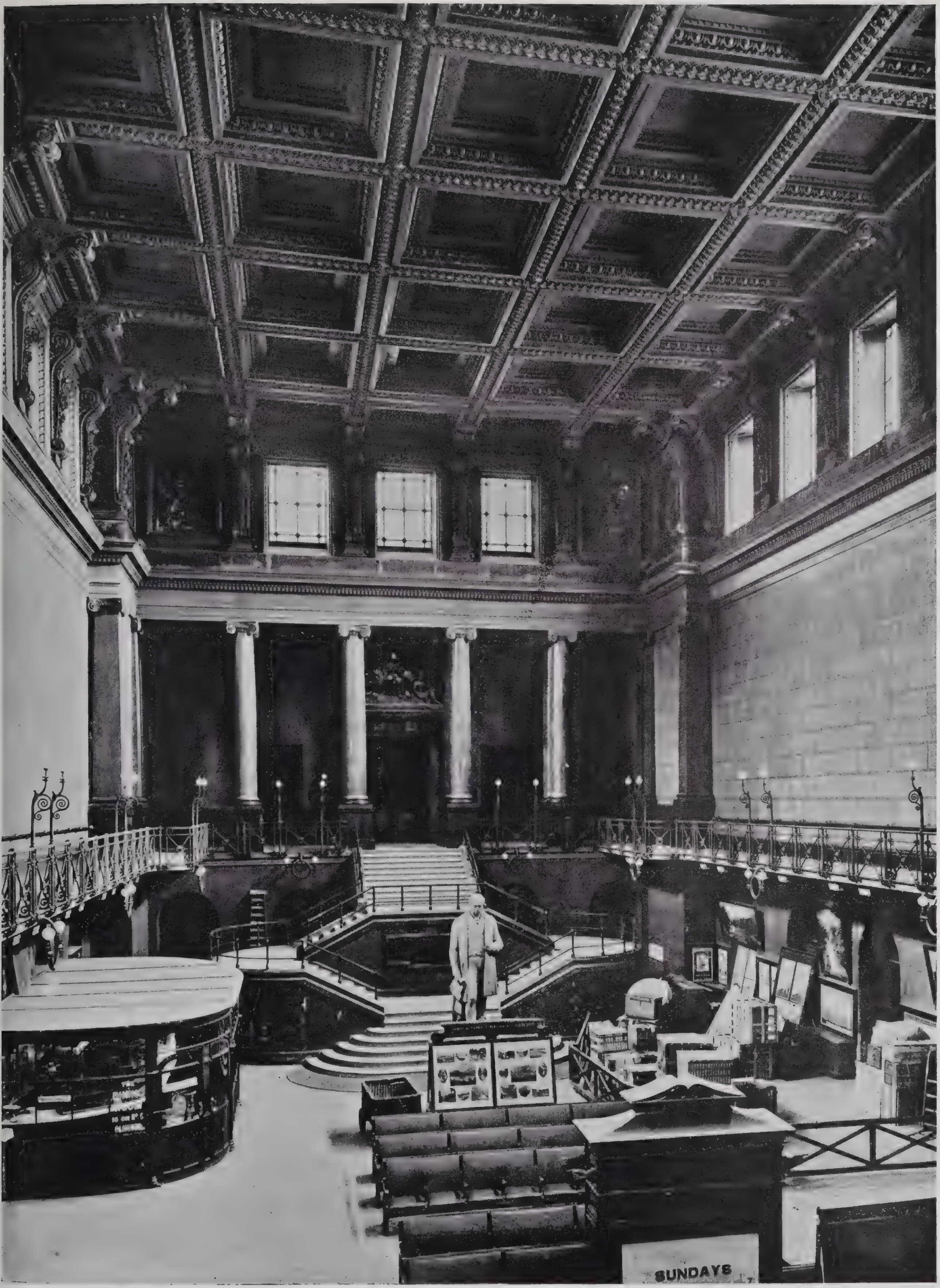
GARDET, SCULPTOR.



SMALL HOUSES OF THE LATE GEORGIAN PERIOD. VII.—' WOODBINE COTTAGE," PETERSHAM, SURREY.



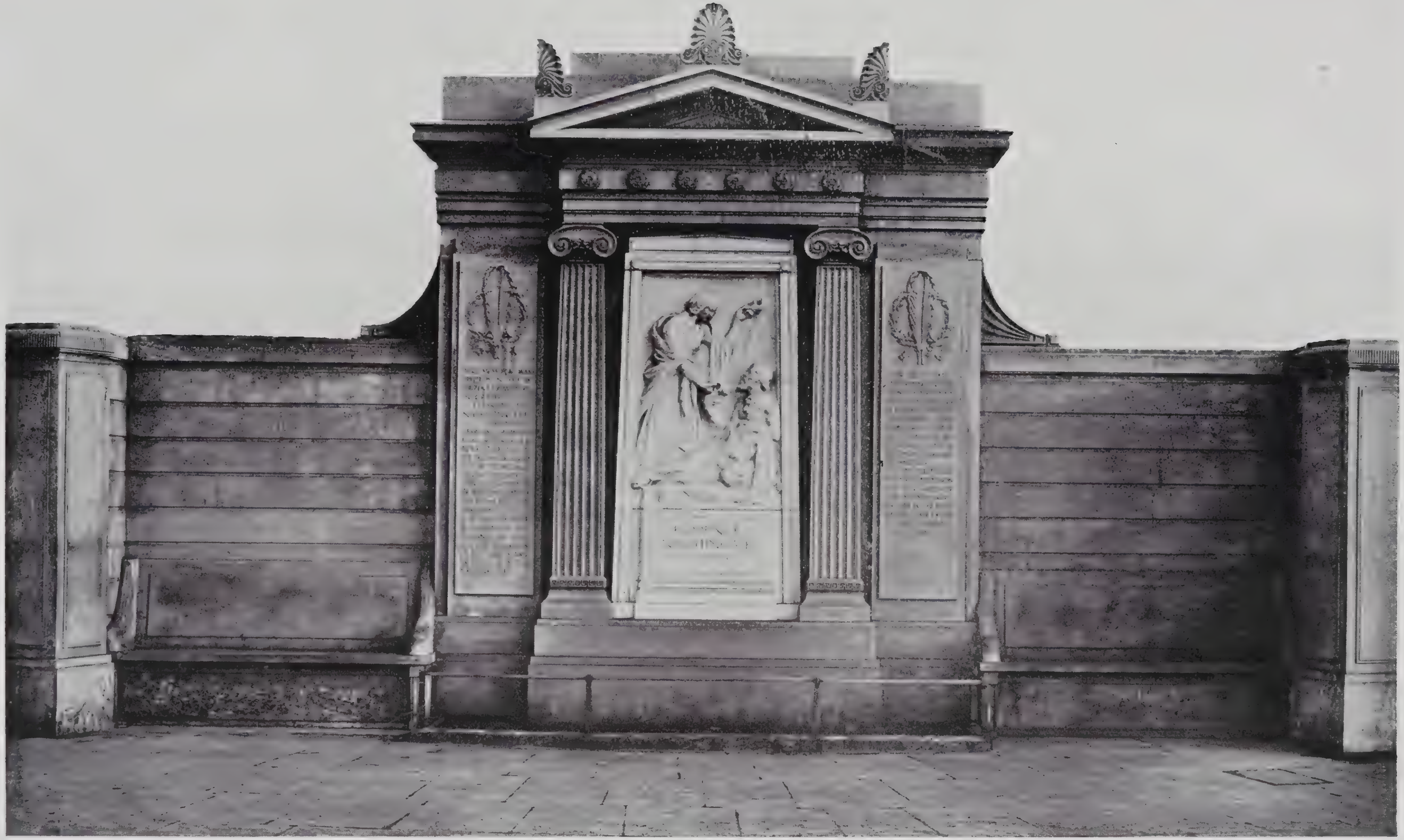
COTTINGHAM'S DESIGNS FOR IRONWORK. XIII.—ANTIQUE ROMAN ORNAMENTS AND CANDELABRA.



MONUMENTAL ARCHITECTURE. XIX.—THE GREAT HALL, EUSTON STATION, LONDON.

PHILIP HARDWICK, ARCHITECT.

(Reproduced, by courtesy of Mr. B. T. Batsford, from "Monumental Classic Architecture in Great Britain," by A. E. Richardson, F.R.I.B.A.



CURRENT ARCHITECTURE. LVIII.—FLORENCE NIGHTINGALE MEMORIAL, LIVERPOOL.

WILLINK AND THICKNESSE, FF.R.I.B.A., ARCHITECTS.

FOR LOCAL AUTHORITIES' SCHEMES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON. M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art. = The Articles of the Town Planning Procedure Regulations (Preparation of Schemes by L.A.s), 1914. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = A Local Authority's Scheme under the Act of 1909. Owner = Owner within the Meaning of the Lands Clauses Acts. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets.

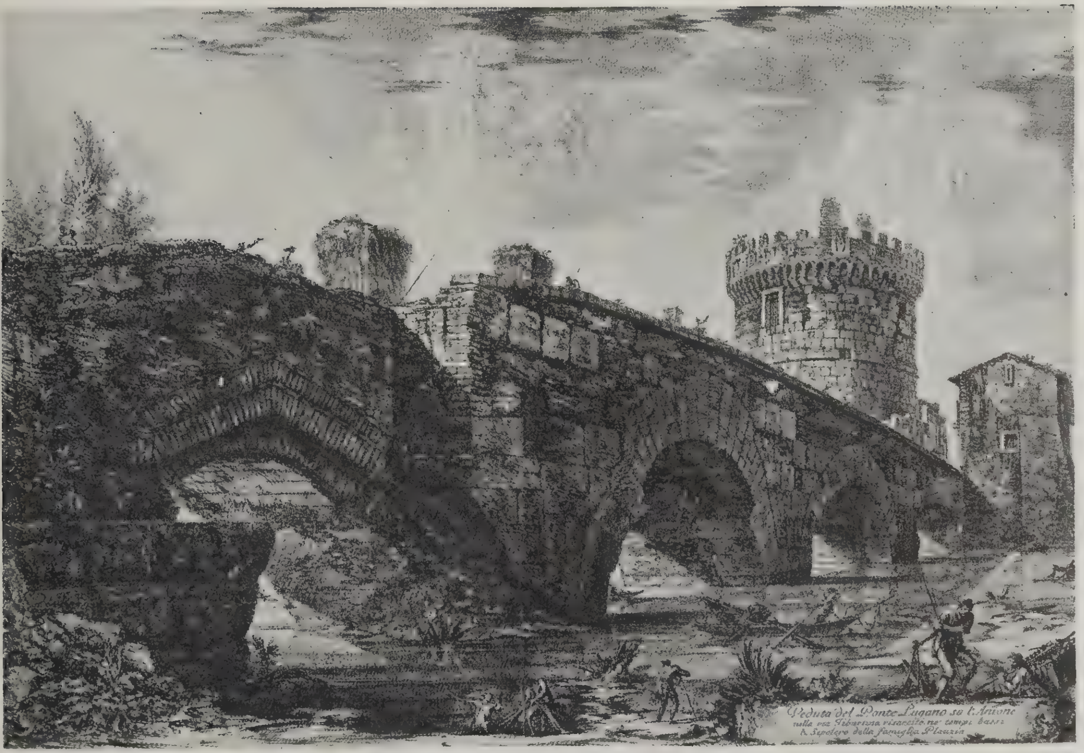
No. and Nature of Stage.	Resolutions of L.A	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 4. Consideration of Draft Scheme preliminary to application to L.G.B for approval of scheme	When Proposals fully considered Resolution to be passed by L.A. approving Draft Scheme and authorising same to be printed and authorising Map No 3 to be prepared, and also authorising Town Planning Committee to take the necessary proceedings set out in Arts. xi and xii. [Art. x.]	(*a*) Serve Notice of Preparation of draft Scheme and of intention to submit same to L.G.B. for approval upon owners, and any Council interested. Also upon C.C. if any main road affected. [Arts. xi. (*a*) and xxvii.]	(*a*) Conferences with Owners, Persons, and Councils interested to consider objections and secure co-operation. [Arts. xii. and iii. (*a*)]	(*a*) As required by officers concerned of L.A. [Art. xii. and iii. (*a*)]	Not later than first notice served under Article xi. (*a*) Deposit Draft Scheme together with Map No. 3 for free inspection and explanation at convenient place, and keep deposited for TWENTY-ONE DAYS from last notice served under Article xi. (*a*) during which time objections in writing may be made under Article xi. (*c*). [Art. xi. (*b*) and (*c*)]			
		(*b*) Send similar notice where necessary to (1) Board of Agriculture and Fisheries; (2) Commissioners of Works. [Arts. xi. (*a*) and xxvii.]	(*b*) Meeting of all Owners, Persons, and Councils interested [Arts. xii. and iii. (*b*) (1)]	(*b*) By notice served at least SEVEN DAYS before meeting. [Arts. xii. and iii. (*b*) (1)] Send notice of Meeting where necessary to (1) Board of Agriculture and Fisheries; (2) Commissioners of Works [Art. xxvii.]				
		(*c*) Advertise notice of such proposal in Local Paper. [Art. xi. (*a*)]	N.B.—The above notices may be incorporated in those sent out in Stage 1, Col. 3, (*b*), and (*c*). [Art. xi. (*c*)]					

CHART OF TOWN PLANNING PROCEDURE FOR LOCAL AUTHORITIES' SCHEMES—STAGE 4.

THE ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, May 13, 1914. Volume XXXIX. No. 1010.

No. 84



Veduta del Ponte Lugano su l'Anione
nella via Tiburtina risarcito ne' tempi bassi
A. Sepolcro della famiglia Plauzia

(*From Piranesi.*)

c

THE ARCHITECTS' &
BUILDERS' JOURNAL.

MAY 13, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1010.

Blind Windows and Architectural Propriety.

THE propriety of introducing blind windows as decorative features of a façade has often been questioned. This subject cannot be discussed with advantage unless we depart altogether from the traditions of controversy which Ruskin established, for it is utterly impossible to arrive at valuable conclusions upon æsthetic matters in the heated atmosphere of a debate where Pharisaical denunciation takes the place of argument, and where no difference of opinion can ever be accompanied by the mutual respect of the disputants. To contend, as Ruskin did, that men of genius and of known integrity such as Christopher Wren, for instance, or Bramante or Sangallo, who, in a spirit of abnegation, devoted their lives to the science of architecture, were guilty of a moral offence in that they chose upon occasion to employ blind windows is to display not only amazing arrogance of temper, but obliquity of vision. Ruskin's attitude towards the great masters of Classic architecture was that of a pedagogue scolding little boys who have been caught red-handed in some petty act of cheating.

We shall see whether this particular offence against architectural propriety—if, indeed, it be an offence—is confined to those buildings whose style is derived from Greece and Rome, or whether it does not occur to a much greater extent in those very structures which our Mediævalists call upon us to admire. Perhaps we shall find that the pot has been calling the kettle black, or we may discover a new application for the analogy of the mote and the beam. It is not our intention, however, to bring charges of moral turpitude against those who employ or refuse to employ any special architectural feature. Discussions upon topics such as the present are seldom profitable unless the protagonists upon both sides are willing to assume, with Plato, that there is no such thing as wickedness, but only want of knowledge.

The ordinary use of the blind window is to complete a pattern which otherwise would be interrupted in a most unpleasant manner, and to give homogeneity to the different façades of a building. It often occurs that a corner house has windows on one side but not on another, but it hardly looks well for it to present a perfectly blank wall towards one of the streets which pass it; and if the houses adjoining and opposite the blind side are all of the normal fenestrated type it would almost appear as an act of discourtesy if any particular corner mansion chose, as it were, to turn its back upon a highway which is not an alley, but a residential street of some pretensions. In such instances as this the problem is solved by introducing sham windows which, by means of architrave and bracketed sills, can often be made quite decorative. The stucco quarters of London provide countless examples of this special kind of architectural good manners, and it is an unfavourable comment upon the present age that these sham windows have gone completely out of fashion and that in our new town houses there is often a complete disregard of such social amenities. Even worse than the blank wall suddenly intruding itself at the corner of a
street is the wall of a house which is punctuated
windows which are in irregular configuration.
polite eighteenth-century forefathers would ne
have tolerated a façade on which there were five
dows in the first storey and only three on the sec
storey, leaving a blank wall above two of the lo
ones. It may have been necessary that the rooms
the one floor should have more light than those of
other, but this is no excuse for the house presenting
aspect which irresistibly reminds one of a man som
whose front teeth have been knocked out. The obv
and correct thing to do is to complete the pattern
introducing blind windows, which give the build
the quality of repose and thus satisfy the eye. H
dreds of houses in the West End of London have t
sides so elegantly treated that nobody would notice
casually passing them that there was any lack
symmetry in the arrangement of their apertures.
purists who would on no occasion deign to emp
such a feature as a blind window resemble very clo
those disagreeable fanatics who, when present a
social function, would stoutly refuse to tell the whi
of white lies. In fact, they are just boors—and
stupid ones, too, and there is nothing more to be
about them.

Blind windows have also an important architect
function to perform when it is found necessary
design a building which it top-lit or which for so
reason or other is not lit from the outside walls.
the façade were absolutely blank, or even decora
by a columnar treatment, there might be nothing
show that the rooms behind were frequented
people at all; it might present the appearance o
granary or some great store-room. The presence
a blind window, however, never fails to indicate t
the structure is a habitable one. The wall of man
picture gallery, market-house, or prison is rende
more expressive by the judicious employment of s
a feature. The façade of a market that has a sli
projecting bay at each end in which there is a sh
window, perhaps enclosed with an arch, is not o
more agreeable to the eye than is a long, plain w
but is endowed with a more appropriate character t
the latter could ever give it. A habitable build
must not present the aspect of a solid and dull impe
trability.

The present is a strange period in which it is nec
sary to defend a legitimate architectural device t
has been used by the great masters of the past with
happiest effect. Unfortunately, many æsthe
theorists have inherited a body of false doctrines, p
pounded by men who, living at a time of great ind
trial expansion and scientific discovery, translated i
the realm of art standards of value which belong
right to the realm of engineering. That is why th
hold up for our admiration a species of building
which architectural forms have been determined
engineering necessities. But in praising the truthf
ness of construction that they believed was chara
teristic of a Gothic church, they overlooked one ve
common element occurring in such churches,

ent in which a sad lack of truthfulness is dis- ed. While they found it difficult too severely to natise the "insincere" architecture which arrived ; "the foul torrent of the Renaissance," they forgot ention, or else they omitted to notice, the appalling ncerity" of the Gothic builder, who made a prac- of employing sham windows not only on the flanks hurches and on their towers, but even on the solid resses. So it is not for the mediævalist to pour n upon the delicate stucco houses whose only fault s to be that their architects, by never permitting complete pattern of fenestration to obtrude upon notice, have shown an unusual anxiety to please passer-by. If, however, we are obliged to discuss natter in terms of degrees of moral rectitude, it may ointed out that more culpability rests with those itects who not only used blind windows, but scan- usly abused them. The exterior of King Henry 's chapel, Westminster Abbey, may be quoted as xample of such an abuse. The whole wall surface vered with sham windows so small that they give appearance of triviality. This may be regarded ne of the chief defects of the style. The Gothic gner having very few decorative motifs at his osal, and no columnar system which can be ied to give interest to blank walls, is com- d to reproduce *ad nauseam* forms which their origin in fenestration. Many Gothic s and monuments are particularly offen- in that they are covered with tiny little blind ows more appropriate to a toy model than to a us work of architecture. There are only two imate uses of such a feature as a blind window; ay be employed to give symmetry to a façade h otherwise would appear incomplete or one- l; and it may also be of great service in helping to rt the appropriate character to a building.

C. N.

Building Interests and the Budget.

VO or three outstanding points in the Chancellor's Budget speech demand notice here from a non-political point of view because of their bearing building interests. Setting aside the forecast of prosperity—the Chancellor believes that while ll not be safe to anticipate a continuation of the boom, the depression will be a shallow one, and ot last long—as being chiefly valuable for such ragement to enterprise as optimism can inspire, o be feared that, whatever the ultimate material may be, the net and immediate moral effect of udget proposals will be rather detrimental to the ng industry. A national system of valuation for taxation is to be set up, and the time that will be med in the necessary reorganisation will be a d of suspense in the material as well as in the l sense. This will accentuate the uncertainty and ervous apprehension which have during the past ears had such a disastrous effect on building ty. In fairness it should be added that no read- ent can be effected without temporary disturb- and that the present system of local government ly antiquated and defective, whatever differences nion may be held as to the methods of reforming he proposed grants in relief of local rates, if they out at all commensurately with the Chancellor's ses of substantial aid, may ultimately stimulate ng enterprise, private as well as public, and this may to some extent set-off the unquestionably se influence of the graduated income tax, with its sed demands on the wealthier section of the unity, who will consequently be likely to spend less freely on construction and decoration. The sed grants for open-air schools, maternity s, and technical, secondary, and higher education bulous where they are not distinctly meagre. An hat appeals to us rather strongly is the increased grant for roads; for we have repeatedly insisted on the injustice of inflicting on local authorities so heavy a share of a burden that has been of late years vastly increased by the development of motor traction; but the proposed grant of £2,480,000 is still inadequate, although it is said to represent 50 per cent. of the cost of maintenance.

The R.A. and Industrial Art.

IN connection with Lord Haldane's announcement at the Academy Banquet, foreshadowing proposals designed to put the art education of this country on a more rational basis, a "Times" representative has been interviewing the President of the Board of Education on this subject. Mr. Pease explained the scheme that is contemplated; it is, in effect, to secure the co-operation of the Royal Academy in art education as applied to industry. At present members of the Academy render some assistance at the South Kensington Art School and the Victoria and Albert Museum, where the study of industrial art is fostered; but their work here is quite unofficial, and the Academy as a body has never identified itself with this particular phase. To amend this state of affairs is the object of the movement. Incidentally it is pointed out that the effect of the scheme would be to bring the Royal Academy into closer relation with the Government. Quite apart from the question whether the Academy, which has always stood aloof from avowedly commercial art while encouraging the exhibition of a class of picture that is essentially commercial in aim, is at present capable of affording the required assistance, we should welcome any development that would bring the Academy and the State into a more definite relationship than at present exists between them. The Academy, as constituted to-day, enjoys many of the privileges of a national institution. At the same time, by virtue of its being a private body, it can evade, and has successfully evaded, several responsibilities that would otherwise have devolved upon it. This fact was elicited by the last inquiry into the administration of the Chantrey Fund, but the tepid recommendations of the Select Committee produced no visible reform. Perhaps the proposed amicable "conversations" between the Academy Council and the Board of Education will lead to a happier result.

Anti-Vibration Buildings.

UNDERGROUND borings have set the architect several difficult problems, and it has at length occurred to a Paris architect that most of these are to be solved by—underground borings. *Similia similibus curantur.* In Paris, as in London, the shallow underground railways are the occasion of sleepless nights and broken crockery to the inmates of houses situated within the areas of vibration; and in the Avenue Bugeaud, at Passy, where the Metropolitan passes under the roadway at slight depth, breaking sleep and fictile ware, an architect whose name ought to go down to posterity, but as yet has not been revealed to us, has built an anti-vibration house. A newspaper writer calls it "A House on Stilts," because its foundations consist essentially of seventeen reinforced-concrete pillars rising to street-level from a stratum of solid rock which was found, free from vibration, at a depth of 60 ft. below. These pillars, for which, of course, shafts had to be bored—and this special work is said to have taken nearly six months to complete, and to have cost £2,600—support a framework of large girders on which the house is constructed, while the façade is said to be "separated from the roadway by a sort of mattress of steel springs." The bed-rock borings and the steel mattress have been found effectual for the prevention of insomnia. It is said, indeed, that the experiment has proved wholly successful. We are glad that its originator is described as an architect, even though he would seem merely to have created further opportunities for the engineer, who does not need them, and an extended use for reinforced concrete, whose applications are already universal. Nevertheless, he will have done his profession as well as the State some service if it turns out that he has hit upon a really practicable method of saving buildings from the horrible fate of being shaken to pieces by vibration, proceeding either from underground railways or from the ponderous traffic of the streets.

The Dudley Competition.

AT the last meeting of the Dudley Town Council the scheme for providing a Town Hall, Police Buildings, and Municipal Offices was discussed, and a report of the General Purposes Committee, amending the propositions as to procedure which had already been put forward, was adopted. The competition is to be thrown open instead of being confined to four Birmingham firms as originally suggested. On the whole, we think this decision was a wise one. The scheme is estimated to cost £40,000, and to restrict the opportunity to local talent—and a selected local talent at that—could only have appeared invidious in a case where so handsome a commission was concerned. It is true that the open competition has many drawbacks, and very rarely results in the unearthing of that unknown talent about which the superficial theorists talk so glibly; but where the choice lies between this species of competition and one so limited that it can hardly be called a competition at all, we prefer the former. The alternative to either—a limited competition between a respectable number of firms selected by the assessor—does not appear to have suggested itself to the Dudley authorities. Yet, of the three, it seems to us the best scheme for this class of competition.

Street Improvements in Paris.

PARIS, well-planned city though it is in the main, shows, nevertheless, many serious lapses from this state of grace. The sincerity of its repentance, however, is evident from the thoroughness with which reformation is being sought and ensued. A notable instance is that of the Rue du Louvre, which is to be extended beyond the point at which several blocks of buildings negative its pretensions as a thoroughfare by abruptly shutting it off from the Rue d'Aboukir. These buildings are to be cleared away, to allow the Rue du Louvre to stretch across the Rue d'Aboukir, straight through to the Rue du Mail, merging, in its course, with the Rue Montmartre, and thus affording a splendid opportunity for the formation of a square or "place," although it is not as yet apparent whether this is the intention. The Impasse St. Sauveur is involved, and the buildings on it, with a dozen others in the district, will be demolished to make room for more stately structures. The Rue du Louvre, which originally bore another name, was at first not much more than 300 yards long, but it was considerably extended in 1880, and in part widened in 1888, while the augmentation now contemplated will give it a total length of nearly a thousand yards. The demolitions of 1880 included several ancient houses, notably the Hôtel Herwarth, where in 1695 Lafontaine died. Of very respectable age is the Rue Montmartre, which was in existence as long ago as the year 1200, but as it has already lost its early configuration, its further transformation will do no great violence to sentiment if only its name is preserved, as it probably will be in spite of the French habit of renaming streets on the smallest provocation. This particular instance of street improvement is only a fragment of the vast operations that in the course of the next few years may regain for Paris its former supremacy in town-planning.

Architects and Specialists.

IF the judgment of Mr. Justice Lawrence in
action of the Secretary of State for War agai
firm of electric-lighting experts conjointly wit
architect is allowed to stand, the relations between
architect and any other professional men who ma
required to act with him will become more than
anomalous and difficult, and the architect's resp
bilities will be enormously increased. This partic
judgment (of which a summary is included in
Special Legal Reports in the present issue) makes
architect jointly responsible with the electric-ligh
experts for the efficiency of the installation w
in accordance with the terms of the contract,
latter were specially engaged to arrange. Hith
it has been very generally assumed that, for sp
work—like lighting, heating, and sanitation—w
may demand more intimate scientific knowledge
an architect can be reasonably expected to possess,
responsibility for such work naturally devolves
the expert. In the case under notice, the judge
that the architect was jointly responsible with
specialists because he had agreed to the adoption
method of wiring which, while well known t
successfully used elsewhere, had in this partic
instance (so it was alleged) failed to give perfect s
faction. This judgment, and, indeed, the whole
ject of architects' legal responsibilities, demand
immediate and most earnest attention of the R.I.
and other professional societies.

THE PLATES.

IN view of the interest attached to the opening
week of the new King Edward VII.'s gallerie
the British Museum, we give in this issue, a
example of current architecture, a detail of the faça
the Extension. Elsewhere will be found a brief acc
of the opening ceremony, and of the career of
architect of the building, Mr. John J. Burnet, LL
R.S.A., F.R.I.B.A. Our second and third p
reproduce the work of Alexander Thomson: *C*
donia Road Church, Glasgow, and a measured d
ing, *Premises*, 40-44, *Bath Street, Glasgow*, by
Frank R. Burnet, who, it may be mentioned, is a
of Professor Gourlay at the Royal Technical Coll
Glasgow. A critical article on the work of Thom
appears in this issue. Next comes an exampl
modern American architecture—a *Bedroom in H*
of Mr. J. B. Duke, New York City, Horace Tr
bauer, Architect—interesting both in design
ornament. Stage V. of our *Chart of Town Plan*
Procedure for Local Authorities' Schemes contin
feature of the Journal which we are glad to s
being thoroughly appreciated; and in a *Pair of Ho*
at Cobham, Surrey, we give another of our
Georgian series (see Special Note). The Wor
Drawing for this week is American: *Entran*
Currier Hall, Williams College, Williamst
Mass., John Oakman, Architect.

SPECIAL NOTE.

Pair of Houses at Cobham, Surrey.

The character of the design for this pair of ho
is one of quiet simplicity. The good effect of
whole is largely due to the proportion of window
wall space, and to the careful disposition of the s
The windows of each house cluster round the entr
door, serving to emphasise the individual house,
at the same time forming one continuous compos
with its neighbour.

The scheme is sufficiently elegant in design,
character of which is summed up in the details of
doors, to suggest the culture of the city imposing
on the quiet and harmonious life of the country sid

S. C.

HERE AND THERE.

the days of my youth I was taken to the Crystal
Palace to see the fountains and the fireworks.
Architecture was not then a ruling passion
me, and whatever interest the structure might
ess as a piece of design was utterly eclipsed by the
t of so much glass and iron, here fashioned to con-
te another wonder of the world. The intervening
s have wrought great changes both to the glory
was Crystal and to my own architectural outlook.
familiar outline has met my eye in every
don guide-book, and softly flashing glimpses of it
been vouchsafed to me from distant vantage-
ts, for it is a place that does not hide its light
r a bushel: the upper stages command views of six
ties, and I suppose therefore six counties can see
pper stages, so that the pleasure is common to all
in the charmed circle. During the years that have
sed I have learned also to regard the Crystal Palace
pitiable effort on the part of the Mid-Victorians
volve something quite splendidly new, and I have
ready to admit that the gods have been good
ot swallowing it all up in an earthquake. With
t restraint, let it be put to my credit, I have
ined from calling the structure a glorified green-
e. The Crystal Palace had become to me nothing
place whose delights centred in Handel Festivals
Cup Tie Finals. But having reached this self-
fying point, I remembered that, really, I knew
little about the building, and had certainly never
npted to study it seriously. During the past week
ve attempted to make amends for my ignorance
shortcomings. I have unearthed, in forbidding
mes, the history of the enterprise, and, taking
age in my hands, have ventured to enter within
precincts of the Crystal Palace, to pace its once-
wed halls, climb its towers, and investigate in
l the mighty expanse of its glazing.

* * * *

s everybody knows, the building was erected, sub-
ially as it stands to-day, for the Great Exhibition
e Works of Industry of All Nations which was
in Hyde Park in 1851. Opposition to it was
d as soon as the proposal was put forward, and the
rse critics kept hammering away until the obvious
ess of the scheme annihilated them. They said
the Exhibition would attract to this country
es of undesirable foreigners, who would probably
with them all sorts of diseases, and leave a
rge behind them, while as regards the monster
case in which all these people were to foregather,
would prove a disastrous affair, for, even if people
ed an avalanche of glass, they would undoubtedly
asted to death under a hot sun. These fearful
ictions proved false. Everything went off with
endous éclat. The Queen, writing in her diary
ay 1, after the opening ceremony, said: "The
event has taken place—a complete and beautiful
ph. . . . The sight, as we came to the
le, where the steps and chair (which I did *not* sit
were placed, with the beautiful crystal fountain
in front of it, was magical—so vast, so glorious, so
ing." The "glass case." however, was not the
nal scheme. There was first of all an open com-
ion among engineers and architects, and 249
ns were sent in. Many of these were not adapted
e site, and in other respects did not conform with
conditions, while others were too expensive to
. Thereupon a design was prepared at the order
e Royal Commissioners, and tenders were invited
arrying out the work. In this design 17,000,000
s were to be used, but as a large portion of the
would have to be carried out during the winter it
doubtful whether the building could be got ready
he opening on May 1, and more doubtful still whether it would then be anything like dry enough to receive the multitudinous and costly exhibits. The Royal Commissioners left it to the successful contractors, Messrs. Fox, Henderson and Co., to make any suggestions they wished, in order that the building might be ready in time, and the suggestion which the contractors made consisted in putting forward another design, by Mr. Joseph Paxton, together with a separate tender for its execution. This design was on the same lines as one already erected by Paxton at Chatsworth as a conservatory for the gigantic water lily called the Victoria Regia, which conservatory was 300 ft. long, 40 ft. wide, and covered nearly an acre of ground. (Paxton was a self-made man whose rose from being a gardener to becoming manager of the Duke of Devonshire's estates at Chatsworth.) The new design was accepted and carried out. Exactly how much credit for it should be accorded to Paxton and how much to the Foxes it is difficult now to say. The customary story is that Paxton sketched the scheme out on a piece of blotting-paper, but that the real problems of construction were solved by the engineers, Paxton's only substantial contribution to the constructional details being an ingenious wooden gutter which he evolved to carry off the rain and condensation water. It would perhaps be fairest to divide the credit equally among those associated in the enterprise.

* * * *

The accepted design was for a structure entirely of iron, wood, and glass, the forms of which were determined by factors of manufacture and construction which it is worth while to review. There were to be no large pieces of any material; as a matter of fact, the heaviest pieces of iron in the building are cast-iron girders 24 ft. in length, none of which weigh more than a ton. The wrought-iron consisted chiefly of round and flat bars and angle iron and sheet-iron was used for the louvres. The great determining factor was the size of sheet glass which could be procured at a cost that was not prohibitive. It was found that such glass could be got cheaply in lengths of 49 in., but that a greater length would be much more expensive owing to difficulties in manufacture. Thus, 16 oz. glass panes 49 in. long and 10 in. wide constituted one of the unit factors in the design of the building. These panes were well adapted to a ridge-and-valley roof having a distance from centre to centre of 8 ft., and three times this was considered to be a convenient length for the cast-iron girders. Thus, a second unit dimension was determined. The building was divided up into multiples and sub-multiples of 24 ft., the wider avenues being made twice that dimension, and the central avenue or nave three times, or 72 ft.

The structure consisted of three stories, the upright supports being cast-iron columns whose thickness varied from ⅝ in. to 1¼ in., but whose external diameter was uniformly 8 in. The columns were about 18 ft. 6 in. high, and were bound together by vertical diagonal bracing.

The greatest problem of all to solve was the glazing. Numerous experiments were made in this connection, among them being a machine which automatically exuded putty into sash bars ready for the immediate reception of the glass, but this proved quite a failure. Ultimately both the trouble of puttying and painting was overcome by simply dipping the wooden sash bars into a trough of paint, brushing off the superfluous coat on the surface, but allowing the paint to remain thick in the grooves, so as to form a bed for the glass.

This covers practically the main constructional features of the Hyde Park building. The details of its re-erection and embellishment at Sydenham I will deal with next week.

UBIQUE.

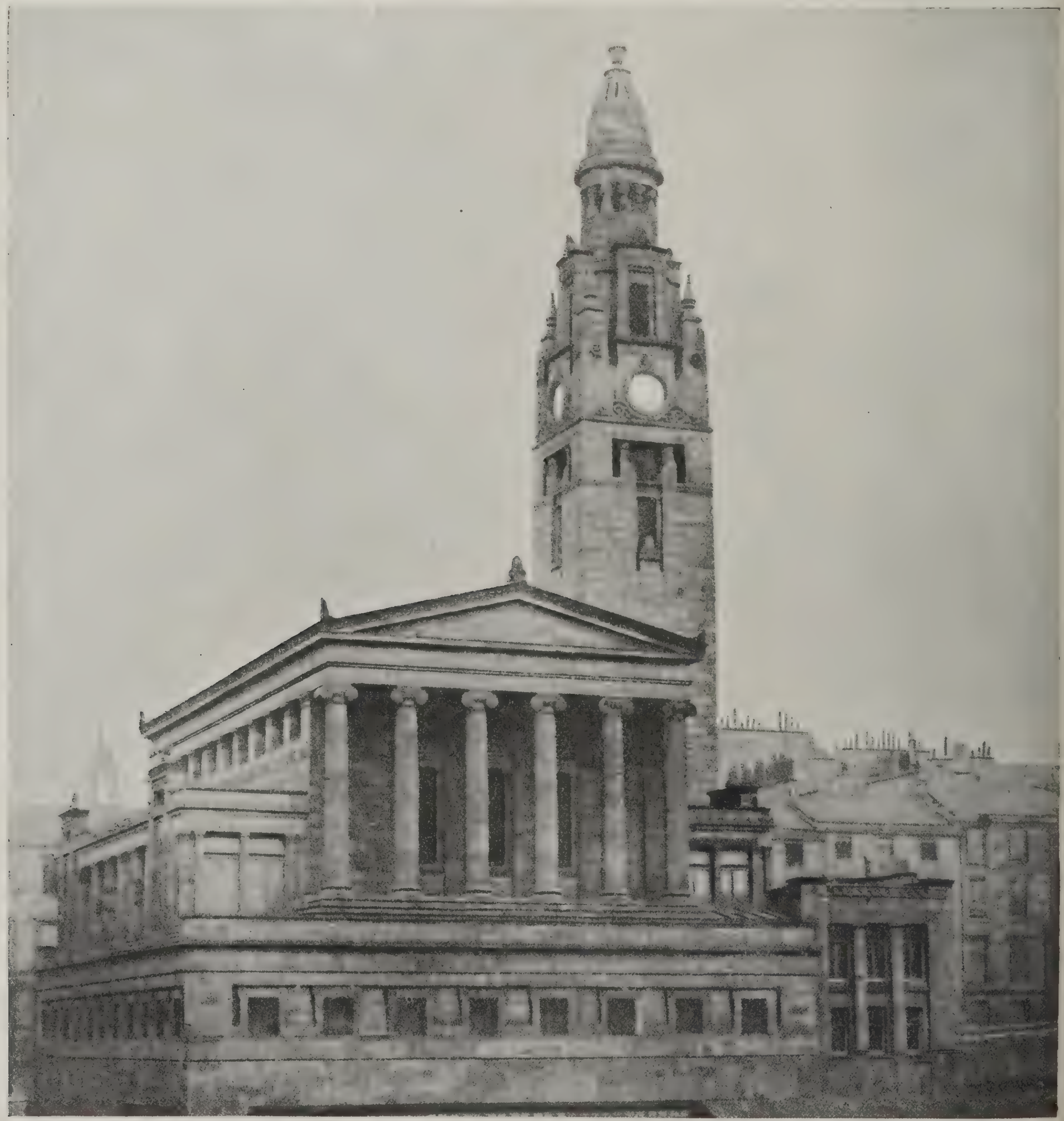
MODERN ARCHITECTS:—II. ALEXANDER ("GREEK") THOMSON.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

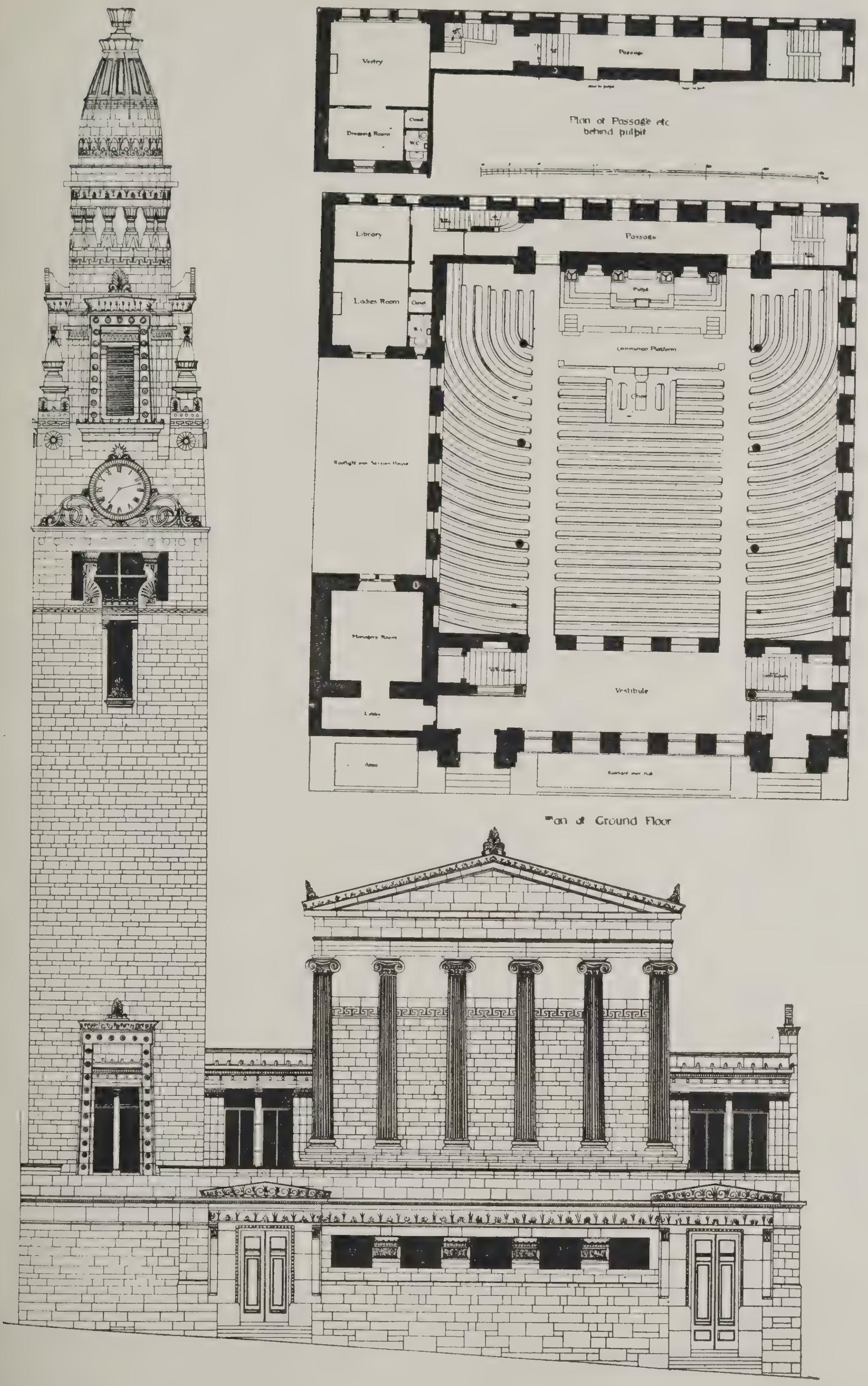
ALEXANDER THOMSON is often described as the most original architect of the nineteenth century. He is distinguished not only as a creator of novel architectural forms, but also as a critic. But neither the novel forms he designed nor the still more novel opinions he expressed with so much vigour would be of much interest for us, were they not due to a conscious endeavour to attain to a stern consistency, to make a rational study of every aspect that the question of style presents; for the study of work whose creator was inspired by a coherent system of philosophy, even if the initial assumptions upon which this is based be quite erroneous, is often more profitable than the most well-intentioned efforts to appreciate what has loosely been conceived.

In any attempt to give an account of the intellectual development of Alexander Thomson, it is quite unnecessary to make lengthy reference to the circumstances of his life, which was singularly uneventful. He was born at Balfron, in Stirlingshire, in 1817, and was the son of John Thomson, a book-keeper in a spinning mill. After Thomson had served for a time
lawyer's office, R. Foote, an architect, saw some dr
ings by him and took him as an apprentice. In r
he entered the office of John Baird, an architec
Glasgow, and about 1847 he went into partnership
John Baird, his son. While in partnership with
he assisted in the plans (which were never carried
for the new buildings for the University of Glas
in a style imitating that of the old college. His w
include United Presbyterian churches in Caled
Road, Vincent Street, and Queen's Park, and
Egyptian Hall in Union Street, Great Western
race, and almost all the buildings in Gordon St
He also designed a bank and offices in Bath Str
His practice was limited to Glasgow, but that was
from choice, for he entered the competition for
Albert Memorial at Kensington. His highly orig
scheme for this monument will be illustrated in the r
number of this Journal. Thomson died at Glasgow
1875.

He owed very little to external influences; in



CHURCH IN ST. VINCENT STREET, GLASGOW. ALEXANDER ("GREEK") THOMSON, ARCHITECT.



ELEVATION TO ST VINCENT STREET.

CHURCH IN ST. VINCENT STREET, GLASGOW. ALEXANDER ("GREEK") THOMSON, ARCHITECT.

MEASURED AND DRAWN BY L. DOUGLAS PENMAN.

his work was in direct opposition to the current of popular architecture, and he expresses in vigorous language his detestation of the Gothic Revivalists and all their works. He poured scorn upon their achievements, their opinions, and even upon their methods of draughtsmanship. "Your Gothic architect," he says, "cannot be bothered with correct drawing; indeed, it does not suit him. He cannot himself tolerate, far less dare he venture before the public with a design in architectural lines merely. He feels without knowing it the poverty of his style, and in order to conceal this from himself and others he draws his design for a new building in the clever, dashing manner which he has acquired in making up his stock-in-trade by sketching amongst the grim and mouldering remains of the Middle Ages. His lines are neither straight, continuous, nor of equal thickness, but jerked, intermittent, and blotchy. He adds to the architectural lines those of the masonry, and by a mode of hatching the individual blocks with a pen, produced by an alternate up-and-down and side-to-side motion of the hand, he gives a good imitation of canted stones in an advanced state of decay." And so on, and so on. He tells us that "Whilst the Roman Revival beginning with Inigo Jones and followed by Wren, Vanbrugh, Gibbs, Chambers, and others has given us many worthy structures, and the Greek has given us the Edinburgh High School and St. George's Hall, Liverpool—unquestionably the two finest buildings in the kingdom—there is not a modern Gothic building of more than ten years' standing that anyone cares a straw about."

Thomson has been called "provincial" by those who like to invent easy explanations of complex things and who are only too glad to find a depreciatory epithet for a manner of building they regard with the instinctive hostility which self-assertive and strange phenomena often inspire. Such an accusation, however, is invested with a certain plausibility when we remember that Thomson remained in Glasgow nearly all his life, and that while he deigned to make use of libraries, he never evinced the slightest desire to travel. The Egyptian elements in Thomson's churches may be reprehensible in so far as he failed to incorporate these elements as parts of harmonious compositions, but it does not help us to form a correct judgment if the use of Egyptian features is condemned at the outset of our inquiry. For the Classic style, if it is to be made capable of satisfying the widest range of human emotions, if it is to develop into that cosmopolitan style to which every artist who is also a philosopher is compelled to look forward (it being the task of philosophy to introduce order into intellectual chaos and to define the most dissimilar objects in terms of a single unity), must extend both upwards and downwards; it must take in both the trivial and the sublime. Every architectural feature, which is really an æsthetic form, and not merely an engineering necessity like the pointed vault or flying buttress, must be included in the Classic style, which would then become an all-embracing system of architectural expression.

History shows that as soon as the Greeks had once defined the Orders, that symphonic arrangement of elements which makes possible the articulation of wall-surface and the establishment of intimate relations between solid and void, the style immediately became capable of indefinite expansion. Even a form apparently so indigestible as the arch was absorbed, and the Romans had no difficulty in inventing an arcaded manner of building which was still eminently Classic. In Renaissance times the dome on pendentives was incorporated as a recognised element of the system. The French succeeded in introducing into their buildings, such as the Louvre, the steep roofs characteristic of the Middle Ages without departing in any essentials from the great traditions derived from Greece and Rome. It was left to the genius of a single architect, Sir Christopher Wren, to bring the noble spire form into the fold of Classicism. But no architect that
lived had a greater ambition than had Alexa
Thomson. He desired to extend his range in
opposite directions at the same time, and to incorpo
in a single building a quality which we are accusto
to describe as Gothic, and one which for want
better name is called Egyptian. He would give
churches the interest of outline which is derived
the juxtaposition of a tower and a low hall. With
combination our mediæval churches have mad
familiar. On the other hand, he strove to make
structures look as stable and permanent as an ob
or a pyramid. This attempt to revivify very ant
forms is often derided as archaism; but it can onl
so derided by those who have labels for everything
no real comprehension of the nature of architec
A form can only be judged by its propriety an
capability of being harmoniously united with
forms; with its novelty or antiquity no artist need
cern himself. It does not help us to understand a
tecture when people describe it as "provin
"exotic," "archaic."

Let us consider the composition of the church
St. Vincent Street and Caledonia Road. These
best be taken together, as there are many poin
similarity between them. One of the most remark
things about them is that they are both raised up
high platform. The lower storey in each case
none of the qualities of a basement. In the first
it is far too big, and out of all proportion to the s
structure; secondly, it has very little connection
the main body of the church. There is no proje
in the lower storey emphasising the position o
portico, while the base of the tower is not articulat
all. If we were to regard the church as a single
position, the errors just mentioned would appear u
donable, and their commission would place Tho
outside the rank of great artists. As he shows i
magnificent Great Western Terrace that he was
cognisant of the ordinary laws of composition, i
only be asumed that the separation of the two st
was a deliberate act upon his part.

The problem he had to solve was a very difficult
His churches were placed in proximity to tall s
buildings, and his pediments would not have app
to advantage if they had not been raised to a cons
able height. As seen from some neighbouring
the church in St. Vincent Street must appear extra
narily fine. But, unfortunately, when one looks
from below, the effect is not so happy. The ma
masonry beneath the church is really intended
related to it in some such manner as the Acropolis
is related to the Parthenon. It is obviously too
to be considered as an entity separate from the ch
and yet too big to be incorporated into its design.
two doors which appear on the south side of this c
conflict most painfully with the portico above
and it may be said generally that the parts of
these churches are unrelated to each other. I
case of the Caledonia Road church the side elev
appears to have very little in common with the
and its cornice dashes into the side of the portic
is there lost. In the tower there is a quite unexp
diminution at the top. In this it differs from the
of Wren, in which every diminution is carefully a
tuated upon the storey below.

These churches do not come under the catego
works of art which explain themselves. They are
bolic. This may be the cause of Thomson's fail
leave a deep impress upon the architecture of our
He exposed the constructional fallacy and the re
fallacy which form the main body of Ruskin's æs
doctrine. Nobody has ever exposed them more
pletely or with greater literary skill than Tho
But the tragedy of the situation is that he fell a
to the symbolic fallacy.

(*To be continued.*)

THE BRITISH MUSEUM EXTENSION AND ITS ARCHITECT.

HE most important event of the past week from the architectural point of view was the official opening on Thursday by King George of the new g to the British Museum, which has just been com- ed from the designs of Mr. John J. Burnet, LL.D., .A., F.R.I.B.A. The extension, which forms the part of a scheme for enclosing three sides—north, , and west—of the Museum, presents to Montague e a façade of twenty Ionic columns flanked by sive pylons on either side. The new frontage, a il of which given on one the plates this issue, is ft. long and ft. high; the le addition g connected e main build- by a "neck" l with the tral reading- m.

he new de is no mere script from a ek model; it plays con- rable origi- ty both in position and detail. It is resting to , also, that t care has n taken to d optical illu- s. With a de which is ly composed long range olumns there lways an ap- rance of hing towards middle. This s been cor- ed in the pre- instance by cing the mns irregu- —that is to the distance veen each is tly increased either end ards the est space g in the le of the de. Another defect of the Classic collonnade when olumns are built quite vertically is that it appears an outwards at the top. Mr. Burnet has provided his illusion by inclining the whole range of columns wards. The extent to which they depart from the cal is imperceptible, but yet sufficient to give the e façade an aspect of perfect repose.

r readers will probably be interested in the follow- rief biographical particulars of Mr. Burnet, whose ait is here reproduced.

r. Burnet was born in 1859. He studied at the e des Beaux-Arts, Paris, from 1874 to 1877, and ved an engineering as well as an architectural ing. In those days the practice of sending young men to study at the great French school was by no means so common as it is to-day; and it is doubtless largely owing to the early training thus received that Mr. Burnet has been able to maintain a standard of design so consistently high. During 1878 he travelled and studied in Italy and France; and on his return he became associated in architectural practice in Glasgow with his father, the late Mr. John Burnet.

Among his earliest works are the Royal Institute of Fine Arts, Glasgow (1881), and the offices of the Clyde Navigation Trust (1886), both buildings being conceived in a style of Neo-Grec. This influence, however, gradually weakened; ending, for the time being, in 1889, with the Glasgow Athenæum (the front to St. George's Place), which is one of the most graceful examples of modern Classic composition that Glasgow has to show.

While nominally associated with his father, Mr. Burnet was solely responsible for Deanston House, Doune (1883), and for the Edinburgh Exhibition buildings. From this time onwards his more important buildings included the Barony Church, Glasgow (1890—his first work in the Gothic manner); Glasgow Western Infirmary Extension (1892-98); Parish Church, Arbroath (1897); Gardner Memorial Church, Brechin (1898); McLaren Memorial Church, Larbert (1900); Atlantic and Waterloo Chambers, Glasgow (1900); Parish Church, Rutherglen (1901); and the head offices of the Union Bank of Scotland. More recently, of course, he has executed some important works in London, including the new offices of the General Accident, Fire, and Life Assurance Corporation in Aldwych, and the premises of the Kodak Company, in Kingsway. Mr. Burnet was appointed architect for the British Museum extension in 1905.

In addition to being a Fellow of the Royal Society of Edinburgh and a Fellow of the Society of Antiquaries of Scotland, Mr. Burnet is Corresponding Member of the Société Central des Architectes Français and of the American Institute of Architects.

JOHN JAMES BURNET, LL.D., R.S.A., F.R.I.B.A.

[*Photo: Annan.*

THE SPECIAL APPLICATION OF THE VARIOUS ROOFING MATERIALS.[*]

In selecting a roofing there should be considered:

(1) Chance of leaks, due to character of construction.

(2) Probable life, including chance of damage by the elements and by wear from other causes.

(3) Fire-resisting value.

(4) Cost of maintenance.

(5) First cost.

The important materials may be classified as follows:

(*a*) Bituminous substances, applied with felts made of rags, asbestos, or jute.

(*b*) Clay and cement products and slate.

(*c*) Metals.

As to the manner of laying the roofing materials, they may be placed in one of two classes: Materials for a flat roof, cemented together, as a coal-tar pitch-and-gravel roof or an ordinary tin roof; and materials for a steep roof, laid shingle fashion.

Bituminous Materials.

The common bituminous materials are: Coal-tar pitch (the heavier distillates of bituminous coal); various asphalts (bitumens found naturally in the solid state); various petroleum products; and various animal and vegetable residues. Their peculiar value lies in the fact that they are practically insoluble in water, and that they are elastic, adhesive, and comparatively stable.

Coal-tar pitch is easily affected by heat and cold, is not acted upon at all by water, is easily worked, and, if properly protected, is very stable. It should ordinarily be used as it comes from the still "straight run," of a consistency suitable to the climate and to proper application. *Water-gas tar pitch*, a by-product in the manufacture of water gas, which is enriched by gas from petroleum oils, resembles coal tar. It is inferior to coal tar pitch for roofing purposes, and materials made from it should only be accepted in the low-priced products. It has more value as a saturant of felts than as a coating.

Asphalts.—These are unsuitable for use in their natural state. They are ordinarily fluxed with products of petroleum.

Petroleums.—The California oils, with their asphaltic base, furnish materials especially valuable for roofing. The blowing of air through a heated still of certain petroleum products produces "blown oils," which, while somewhat lacking in adhesive properties, are not easily susceptible to atmospheric changes and are valuable especially for roofing coatings.

A single asphalt fluxed with a single oil is for most purposes a crude and unsatisfactory material. To secure the best results for any desired purpose, several oil and asphaltic substances must ordinarily be compounded. This requires skill and experience. Those properly made are for certain conditions invaluable, particularly for ready roofing, for which tar products are not suited.

The asphalt and petroleum products are not so readily affected by heat and cold as is coal-tar pitch, and lesser amounts of them are necessary to get good results. They are more expensive, require more skill in handling, and, when protected, some at least are to some extent liable to lose their life by drying out of the oil fluxes. Unprotected, they do much better than does coal tar.

Felts.

The bituminous substances are used with felts whose qualities considerably affect the roofing. The ordinary felt is made of rags, mainly cotton. "Wool Felt" is a misnomer. Asbestos felts, as compared with the rag felt, act less as a carrying medium for the bitumens, but rather as a protection to the layers of bitumen. They are not suited for use with coal-tar pitch, but are not injured by hot asphalt. They are more expensive than rag felts, but have some peculiar and valuable qualities. Burlap made from jute decays easily when not protected. It is used in a few ready roofings, with rag felts, to increase their tensile strength, the need of which is not generally agreed to.

Built-up Roofs.

The bituminous roofings come ready to lay, or can be built up on the roof, using layers of saturated felt mopped with pitch, and properly protected.

The built-up roof is especially valuable for flat surfaces. It can be made as heavy as desired, and if properly laid and of good materials, it gives a roofing which by long experience has been shown to be economical and efficient. Where the roof is to be subjected to wear and where the character of the construction warrants the expense, flat tiles or bricks should be used as a protective coating to the roofing instead of gravel or slag.

For the flat roof built under average conditions, coal-tar pitch is recommended in preference to asphalt products. It is more easily handled, requiring less skill, and while more material is necessary it is still cheaper, and in our opinion more certain results can usually be expected from its use when laid by the average contractor. The large amount of material, although heavy, has an insulating value. Good results, however, can be expected from built-up roofs using good asphalt compounds where laid by skilled workmen.

When the slope of the roof is over 3 in. to the foot, the application of a built-up roof becomes more difficult for both coal-tar and asphalt, it being harder to get even mopping, and there is more chance of accident for the men. The desirable straight run coal-tar pitch cannot be used, it being necessary to add some stiffening material which is supposed to affect somewhat the life of the pitch. This must not be done except under supervision skilled in such work, and especial care must also be taken in the selection and application of the stone or slag coating.

Built-up roofs with a ready roofing for the coating sheet are proposed by various manufacturers. They should have their best value for steep slopes.

The advantages of a coal-tar pitch built-up roofing are such that it is recommended where a permanent roof is desired, and where the character of the structure allows the building to be so designed as to allow its use. A flat roof makes an economical structure and has small fire hazard. A pitch of from $\frac{1}{2}$-in. to 1-in. to the foot is better than anything steeper. With proper materials and application, a life of from fifteen to twenty years can be expected with a flat roof.

Ready Roofing.

The ready roofing has better value for the steeper roofs than for those of small pitch. It averages much cheaper than the built-up types. Most kinds require occasional recoating. For flat slopes they are hard to lay absolutely tight, and they not economical for a permanent structu but on slopes of from 3 in. to the foot their use is more justifiable.

Ready or prepared roofings are reco mended for use on small temporary a other buildings, where the cost, consid ing maintenance, of more expensive ro ings is not justified. They are also value for steep slopes where a built-up c tar roof cannot be used, and for locatic where the skilled labour for a built- roof is not available. The steeper the slo the greater their relative value and wider their economical field. The heav varieties are in general the more desira because of their chance for longer life a their greater fire-resisting value. making selections the reliability of manufacturer, service tests, and the c should be governing factors.

On the steeper slopes the use of rea roofing shingles properly reinforced, so to prevent curling up at the corner a fraying on the exposed edges, and l shingle-fashion, is growing. They are su posed to give better results than the rol goods, but cost more. They would se at least to be worthy of investigation.

Slate and Tile.

Slate makes a good roof if of go quality and properly watched. It brea easily and cannot be walked on witho danger to the slate.

Tile of good quality gives good resu It is not so tight as slate, but does break easily. It has architectural val and its use is growing, with improveme in the product and in the variety of colou

Slate and tile of suitable quality, p perly protected and fastened, can be reco mended on roofs with a pitch of 6 in. the foot or over, where expense is not governing feature and where they aid producing the desired architectural eff Except that where there is a considera chance of driving snow, 8 in. to the f should be the flattest slope allowed.

Asbestos Shingles.

Shingles of asbestos and Portland cem are of value. They have some elastic and can be drawn down tight.

Wood Shingles.

Wood shingles are not now desirable a railroad structure.

Cement Tile.

Small cement tiles are not considered much value, being brittle. Large ceme tiles reinforced, laid without sheathi directly on the purlins, are in use on sho and freight houses, and seem to have co siderable merit. Glass can be introduc into them, thus avoiding the expense skylights.

Metal Roofings.

Galvanising of steel seems to be w worth the expense. Tests of lead-cover steel sheets indicate good results. Lar sheets of corrugated galvanised steel c sometimes be used economically where t building is not to be heated.

In using metals, every effort should made to secure those of good quality. T pure irons have value. Their virtues ha perhaps been overstated, but they are expensive, and experience seems to dicate considerable economy by their u as a substitute for wrought-iron and stee

Copper, lead, zinc, and Monel metal a used for roofing, but they are not of val for ordinary railroad structures.

General Comments.

In the laying of all roofings, thoroug

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[*] These data are taken from a report of the Committee on Buildings of the American Railway Engineering Association.

in the preparation of flashings and around openings is of vital import-

get a satisfactory roof there must be ɔle structure; careful attention must ·en to the design of gutters, and with types particularly there must be ıatic inspection and regular repairs. ying a roofing its fire-resisting quali- lepending to a considerable extent on uantity of material as well as its y, are of great importance. A build- vered with a heavy coal-tar pitch-and- roofing is a better fire risk than one d with corrugated steel sheets, or a light ready roofing. It does not put a cheap roof on a good build- The annoyance and indirect expense oned by leaky and short-lived roofs rely compensated for by any possible in first cost.

ETIES AND INSTITUTIONS.

ANCHESTER SOCIETY OF ARCHITECTS.

a meeting of the members held on ɔth ult., the Report and Accounts ıpproved and adopted, and the follow- fficers and Members of Council were l:—

sident: Mr. F. B. Dunkerley, .B.A.

-Presidents: Mr. F. P. Oakley, .B.A., and Mr. J. B. Gass, .B.A.

ıorary Secretary: Mr. Isaac Taylor, .B.A.

stant Hon. Secretary: Mr. J. T. ay, A.R.I.B.A.

nbers of Council: Messrs. John e, John Ely, H. Q. Farmer, W. C. sty, Edward Hewitt, P. D. Lodge, Ogden, J. H. Sellers, J. H. Wood- P. S. Worthington, J. H. Worth- , and W. Cecil Young.

Annual Report.

ial General Meetings.—Four general meetings of the members been held, when two Fellows and Associates were elected.

gnations, &c.—The resignations of Fellows, five Associates, and six ıts have been accepted, and four rships have lapsed.

ths.—The Council deeply regrets to the deaths of B. W. H. Brameld w) and W. M. Gillow (Associate).

istration.—Consideration has been by the Council to the much-debated of the Registration of Architects; terim Report of the R.I.B.A. Regis- Committee was under review, and ɔuncil adopted a resolution to the that, in its opinion, a Registration desirable, but in view of the diffi- surrounding the matter, it is better proceed at present with the proposed ration Bill, but to endeavour to ob- new Charter on the lines laid down above-mentioned Interim Report, ded that it is desirable to submit the Registration Bill to the members of .I.B.A., so that it may be settled for submission to Parliament when I.B.A. Council shall think fit.

srs. W. Orlando Jones and G. B. oft were each awarded by the Man- University a Travelling Scholarship and a Graduate Scholarship (£25), e former has also been awarded a rship by the Glamorgan County l.

bition of Prize Drawings.— hibition of a selection from the ted designs and drawings in the A. Competitions for Prizes and Studentships, 1913-14, will be held at the Society's Rooms, 16, St. Mary's Parsonage, Manchester, during the fortnight commencing Monday, June 8, 1914.

It is duly recorded that the "Pugin Studentship" has been awarded this year to W. Cecil Young, a member of this Society.

THE NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.

A satisfactory state of affairs was disclosed at the annual meeting held in Nottingham on Tuesday, April 21, of the Nottingham and Derby Architectural Society. The retiring president, Mr. E. R. Sutton, occupied the chair.

The council's report for the year ended March 31, 1914, disclosed a membership of 119, an increase of 28 over the previous year. The approval of the Sheffield Society having been obtained to the rearrangement of the boundaries of the Sheffield, Nottingham, and Derby Societies, the amalgamation of the two last-named took place in May. A Committee are now considering a revision of the rules. The council had appointed a committee to deal with all matters within their province under the Town-Planning Act of 1909.

The Town-Planning Committee regretted a lack of enthusiasm on the part of the city authorities for any cohesive scheme of town-planning, and trusted that the example set by smaller towns would have its influence.

The vice-president, Mr. Harry Gill, M.S.A., Licentiate R.I.B.A., was elected president, and Mr. H. G. Watkins, A.R.I.B.A., vice-president, Mr. F. M. Royle was reappointed hon. secretary and treasurer.

It was decided to nominate the retiring President, Mr. E. R. Sutton, for the Council of the Royal Institute.

ARCHITECTURAL ASSOCIATION OF IRELAND.

Annual General Meeting.

The annual general meeting of the Architectural Association of Ireland was held on April 30 at the rooms of the Association, 15, South Frederick Lane. Professor W. A. Scott, A.R.I.B.A., out-going President, occupied the chair, and there was a large attendance.

The following officers and committee were elected for the session 1914-15:—President, Harry Allberry, A.R.I.B.A.; Vice-President, Frederick Hayes, M.R.I.A.; Hon. Treasurer, T. F. Strahan; Hon. Librarian, T. L. Cullimore; Hon. Secretaries, Hubert J. Lundy, Louis F. Giron. Committee—Messrs. J. Geoghegan, H. G. Leask, Page L. Dickinson, J. M. Mitchell, C. W. Becket, Geo. L. O'Connor, W. S. Keatinge, M. J. Burke, and Professor W. A. Scott.

Mr. R. C. Orpen, R.H.A., President Royal Institute of Architects of Ireland, moved the adoption of the annual report, which stated that the total membership of the Association now stood at 111. The lending library had been more fully used by members than in recent years, and on the advice of the hon. librarian, Mr. T. L. Cullimore, several new books had been purchased, periodical magazines bound and shelving provided to facilitate access to unbound copies of technical journals. Generous donations to the library had been received from Mr. R. O'Brien Smyth, R. M. Butler, the President, and other members. The Technical Museum did not increase as rapidly as the Committee would wish, and it was regrettable that manufacturers did not more generally avail themselves of the opportunities offered by keeping the members in touch with materials and other requirements for building purposes. Four sets of drawings were submitted for the Institute Prize, and were assessed by Mr. C. H. Ashworth, who placed Mr. A. A. Murphy first. The President's prize was won by Mr. W. A. Dixon, and the Downey bronze medal by Mr. W. N. Spence. The coming Civic Exhibition could not fail to be of interest and instruction to architects generally, and particularly to students who in future years might have unique opportunities of assisting in carrying out schemes of town-planning and housing of the working classes. The Committee, therefore, considered the Exhibition worthy of active support, and representatives were elected to the Executive Committee. A past president of the Association, M. G. L. O'Connor, had been appointed manager of the Exhibition. The expenditure incurred during the year, together with the amount of outstanding subscriptions, had reduced the balance in the hands of the hon. treasurer, but the policy of the Committee was to spend as much as practicable on educational work, while mindful of the financial stability of the Association.

The outgoing President then delivered his valedictory address, in the course of which he spoke of the encouraging work achieved by the classes and clubs connected with the Association, and said everything pointed to still more extensive work in the future. In the coming session there would be ample opportunity of visiting many important new buildings now in course of construction in Dublin and studying modern methods of workmanship and decoration. In the course of reference to the question of registration of architects, he said their own Royal Institution had declared in favour of it, and it really was a very pressing question in this country. Referring to the forthcoming Civic Exhibition he said their Association was supporting it, and their President and Hon. Secretary had been appointed to represent the Association on the Executive. The Exhibition would be an event of great interest, and it was to be hoped that a comprehensive scheme for planning in Dublin would be evolved.

Mr. H. Allberry, the incoming President, then took the chair.

NEW CHURCH OF ST. MARK, HARLESDEN.

The new Church of St. Mark, Harlesden, N.W., of which the foundation-stone has just been laid by the Lady Hilda Mosley, will have seating accommodation for about 900. The church will consist of nave, 90 ft. long and 32 ft. wide (inclusive of pillars); south aisle, 84 ft. long and 12 ft. wide; and north aisle, of same length and 13 ft. 6 in. wide; chancel, 37 ft. long and 24 ft. wide; side chapel, 37 ft. long and 14 ft. wide; organ aisle, with loft over for organ; and clergy and choir vestries divided by removable screen so as to form one large room for parish meetings, etc. An arched recess for the font will be formed at the west end of the nave. The nave and chancel will be of lofty proportions, with two light clerestory windows and open timber roofs of arched form, and there will be arcades of stone pillars and moulded stone arches dividing the nave and chancel from the aisles and side chapel, and a six-light tracery window at the east end of the chancel. The aisles will be more than usually lofty, and covered with leaded roofs of flat pitch, open timbered underneath. The architect is Mr. J. S. Adler, of London.

EXHIBITION OF BRITISH ARCHITECTURE IN PARIS.

The Exhibition of British Architecture in Paris, organised in England under the auspices of the Royal Institute of British Architects and the Architectural Association, at the request of the Société des Architectes Diplômés par le Gouvernement, will be open from May 15 to 23, at La Salle de l'Ancien Jeu de Paume, Place de la Concorde, Paris. The exhibition is divided into three sections, namely, Modern Work, Students' Work, and Architects' Holiday Sketches. The exhibition will be opened by the President of the French Republic, Monsieur Poincaré.

Members of the Institute and Association are invited to attend a party which is going over to Paris in connection with the exhibition. The following is a programme of the arrangements:

Friday, May 15.

10 a.m.—Leave Charing Cross, arriving at Paris 5.30 p.m.

8.30.—Banquet with the Société des Architectes Diplômés par le Gouvernement, at which the Under-Secretary of State for Fine Arts will preside.

Saturday, May 16.

10 a.m.—Opening of the Exhibition of British Architecture at La Salle du Jeu de Paume, Place de la Concorde, by Monsieur Poincaré, President of the French Republic.

Afternoon.—Visit to Salon.

Sunday, May 17.

Visit to Versailles.

Monday, May 18.

Visit to Fontainebleau.

Members of the Royal Institute of British Architects and the Architectural Association wishing to join the party, which will include ladies, should communicate with Mr. F. R. Yerbury, Secretary of the Architectural Association, 18, Tufton Street, immediately, who will supply further details.

BEDMINSTER PUBLIC LIBRARY.

Bedminster Public Library, which is the gift of Mr. G. A. Wills, was designed by Sir Frank W. Wills, F.R.I.B.A., and Sons, and the contract was secured by Messrs. A. Dowling and Sons, of Bristol, who have carried out the work at a cost of about £10,000. The structure stands on a kind of tongue surrounded by East Street, Trap Street, and New Charlotte Street. The principal entrance is from the main thoroughfare, and in a line with the doorway there is a corridor with mosaic floor, 10 ft. in width, running to the rear of the building. On the right is the newspaper room, 102 ft. by 32 ft., with a lesser section, measuring 26 ft. by 21 ft., at the end, intended for the use of jnveniles. On the left of the hall is a reference and magazine room, the dimensions being 32 ft. 6 in. by 16 ft. 6 in. Beyond it is a stack room. 43 ft. by 26 ft., equipped with counter of teak, polished, and steel stacking for the reception of books; and also a room for the librarian, who from it can command a view, through a glass screen, of the whole of the ground-floor. A clean and neat appearance is given to the apartments owing to their being tiled to a height of 4 ft. On the first floor is a lecture-hall, 77 ft. 6 in. by 33 ft., having a wagon-head ceiling, and platform, with a proscenium and lateral rooms for artists.

OTHER PEOPLE'S OPINIONS.

Inigo Jones's Stage Work.

In following the development of the art of the theatre during the seventeenth century in England it has always been a puzzling feature to the student that, despite the perfection of stage-craft attained in the Court theatre under the hand of Inigo Jones, the public stage should have remained quite uninfluenced. For while the masques and plays presented at Court were being produced on an ever-increasing scale of magnificence, the popular theatre still clung to the traditions of the Elizabethan stage. It is not suggested that the proprietors of the public theatres could ever have hoped to rival the extravagant courtly productions of the Court, but that no attempt should have been made to adopt movable scenery in a London theatre until half a century after its introduction into England by Inigo Jones, is remarkable. . . . It is perfectly true that the theatrical work of Inigo Jones, which ended with the death of his chief patron, Charles I., had been centered in Court and private productions, and although several theatres were erected in London during his day, we have no record of his having had a hand in their design in a single instance. But was all his brilliant work for the Court theatre, into which he had put so much of his genius, to fall to the ground then? Can no relationship be traced between his stage and the late theatre wherein, a few years after his death, movable scenery was first introduced? Up to the present time no documentary evidence has been produced in proof of any such connection.—Mr. W. G. Keith on "The Designs for the First Movable Scenery on the English Public Stage," in the "Burlington Magazine."

Mr. Markino on Tube Architecture.

Just for an example, look at the Tube Stations! I think that ugly red building is simply an eyesore. But we must not forget, at the same time, that there is another important element beside the art. That is the business. I am sorry to say but these two elements don't go well together. Art and Business are always enemies to each other. Yes, you know the ugliest things are the best advertisement for the business, and quite natural, too. . . . Even such an artistic country like France has been very much handicapped with the business. . . . When I go out for sketchings, I always get very tired and I exclaim—"Oh, I am tired, I must go home, but where is the tube station, then?" I stretch myself a little higher by standing on my toes and look round. Then I can see at once that dreadful red building through between the shoulders of the crowd, and I feel I am relieved! Suppose if the tube stations were made quite artistic, could they attract my tired eyes as quickly as those hideous buildings do? How very difficult to let art and business meet together!—Mr. Yoshio Markino on "London of the Present."

American Craving for Thatch.

In Europe, where the baneful influence of the steam saw-mill is not yet so apparent upon the architecture, where the mortise-and-tenon house-frame is still in use, and where the carpenters, more than with us, are joiners in the true meaning of the word, with some sense of craftsmanship and feeling for form, the smaller dwellings still show in their mass, and particularly in their roof lines, those logical and satisfying forms which come from the hand-wrought effort of the real craftsman,
and when such roofs as these are co
with thatch they claim a place in the
scape in a way quite impossible witl
machine-made roof. It is not surpri
then, that the American architect, wh
of all the products offered him in
country can scarcely find one roofing
satisfies his craving for texture and
tion in colour, turns for relief to th
and because of its limitation for ge
use, endeavours to imitate its effec
other roofings.—The "American Arcl
tural Review."

Plain and Decorated Walls.

Notwithstanding the many advan
of perfectly plain walls in the room
domestic buildings, it is certain tha
desire for some form of painted de
tion will continue to be felt by all who
a spark of imagination or artistic pe
tion. Indeed, plain walls themselves
the question, for they are employed cl
to enhance the value of whatever de
tion is seen against them. They a
tuate the effect of framed pictures;
are used as a foil to curtains and c
ings; they efface themselves so tha
decorative character of furniture ma
more truly appreciated. In a neg
way they are themselves decoration.
terned papers, of course, are merely a
venient form of painting the wall. Fu
mentally they have no other justific
for existence. We do not employ a
unit of design and repeat it mechani
all over a wall because that is the
possible thing to do, but because it is
nomical and convenient. It is true th
some diaper patterns the repetition o
ornament can scarcely be too exact
the more elaborate and organic the d
the more we feel the need for varie
treatment. A familiar instance of th
seen in landscape friezes in which
may be human figures and animals.
paper manufacturers endeavour to
them in such a way as to allow the gre
latitude in their application. You
buy a frieze in wall-paper which a sl
paper-hanger will use with such discr
as almost to give the impression that
hand-painted. He will select his prin
features, cut them out, put them in
most suitable positions round the r
and cunningly connect them up with
noticeable parts of the design. He
produce rhythm without obvious repeti
This is an artful approach to the h
painted frieze in which there is no re
tion at all.—Mr. E. W. Gregory
"Modern Painted Rooms" in "Land
Water."

A Definition of Fashion.

Fashion is the ephemeral dominati
taste. In this definition the
"ephemeral" is most important, as i
tinguishes fashion from custom, trad
and similar groups of ideas; it forms
logicians call the connotation, and
only the denotation, of its essential n
ing. In the special subjects with w
we are dealing (Art and Art industr
thus differs from tradition in that it
not convey to us, or imply, an establ
school of art, an important definite re
of its history or a period. Still less
the expression of an age or a nation w
is conveyed to us by the term fas
Change is the life and soul of fashion
is this element of change which mak
fashion and not tradition. When on
has cast off this element it may becon
least a convention or be advanced to
dignity of a custom or tradition, or
be embodied among the national and
torical characteristics.—Sir Charles W
stein.

MODEL ANSWERS TO R.I.B.A. EXAMINATION QUESTIONS.

BY WILLIAM FRISKIN, A.R.I.B.A., ASHPITEL PRIZEMAN, 1913.

publish below the third of a series of Model Answers to Questions set for the Final Examination of the Royal Institute of British Architects, held last November.

B$_2$. CONSTRUCTION.—PART 2.

tion 8.—In a terrace of old houses vhich are all alike and consist of round floor and three floors over, it is roposed to pull down one of the entre houses in order to build new remises consisting of basement, round and three floors over. Each ouse has a frontage of 18 feet and a lepth of 40 feet, and each storey is o feet high, floor to floor. Draw to scale of $\frac{1}{4}$-inch to a foot, the shoring ou would erect (plan and elevations equired); and figure the scantlings.

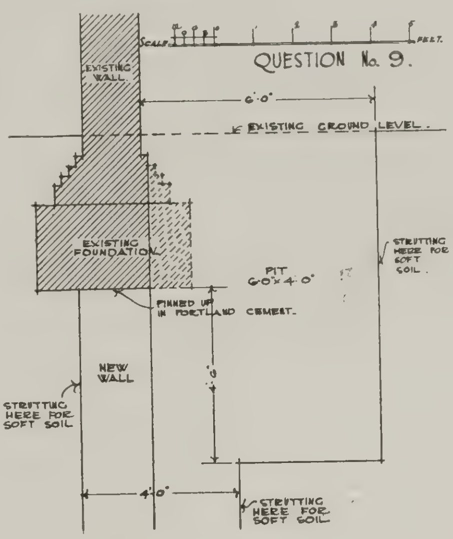
swer.—See diagram.

tion 9.—Describe in tabular form in heir proper sequence all the various perations entailed in under-pinning he party walls and forming the new asement in the previous question. llustrate your answer with any ketches you many consider desirable.

swer.—(1) Build the cross walls to n the party walls.

Remove the soil at foot of party down to the level of the existing lations.

Sink access pits, 6 feet × 4 feet, close ist the walls (see diagram) to a depth of at least 4 feet below the bottom of the existing foundations.



Scale
FEET.
QUESTION No. 9.
EXISTING WALL
6'-0"
EXISTING GROUND LEVEL
EXISTING FOUNDATION
PIT 6'0"×4'0"
STRUTTING HERE FOR SOFT SOIL.
PINNED UP IN PORTLAND CEMENT.
NEW WALL
STRUTTING HERE FOR SOFT SOIL
4'0"
STRUTTING HERE FOR SOFT SOIL

(4) Carry down the excavations below the party walls in pits 4 feet × 4 feet to the depth required for the new basement, placing all necessary strutting and planking.

(5) Form the concrete foundations for the new wall.

(6) Carry up the new wall in brickwork and cement mortar, toothed up, at the ends of the 4-feet lengths.

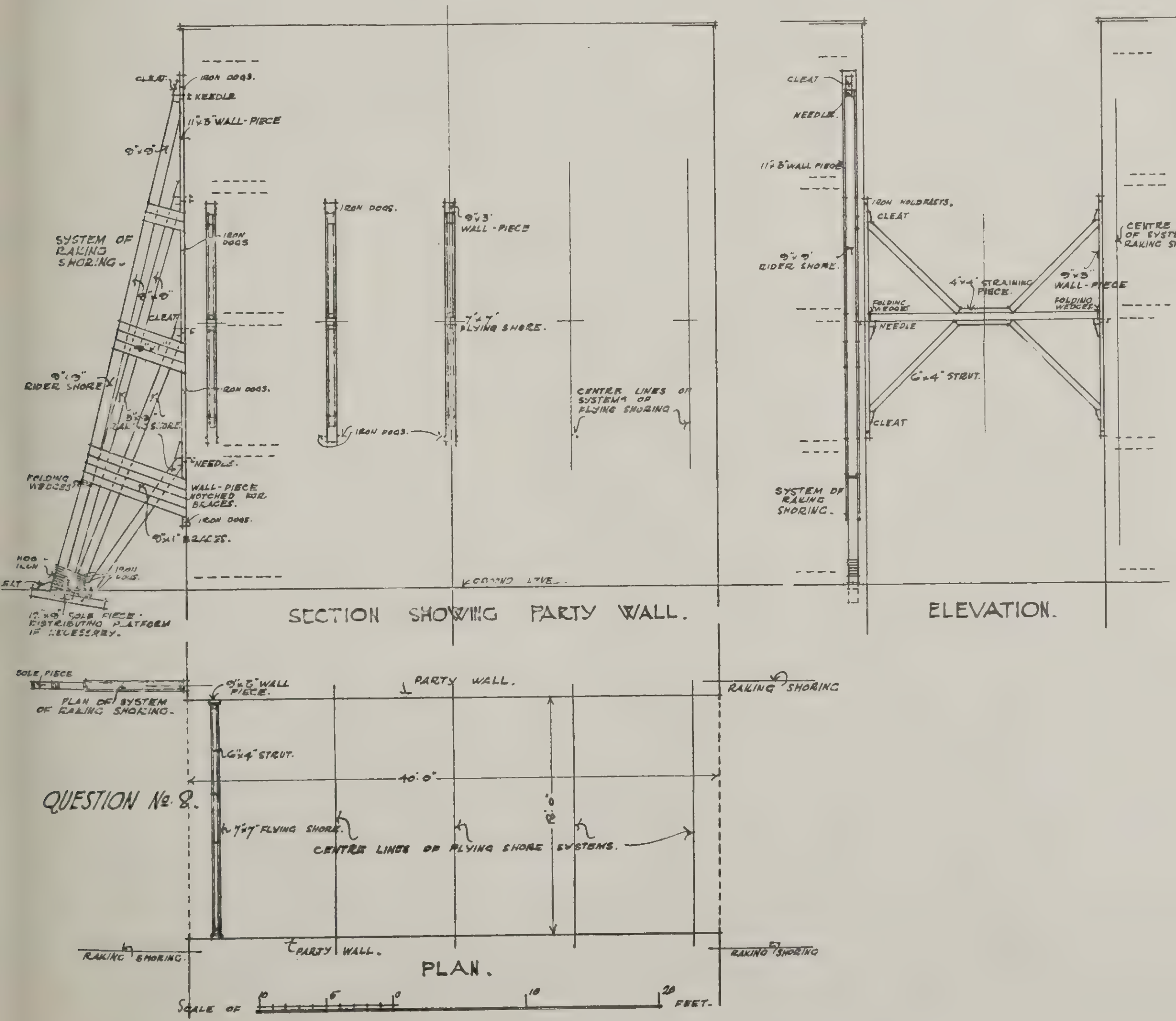
(7) Carry the brickwork hard up to the bottom of the existing foundations, and pin up in Portland cement.

(8) Sink intermediate pits in 4-feet lengths, and repeat the operation until the whole of the party-walls are underpinned.

(9) Excavate the soil to the required depth.

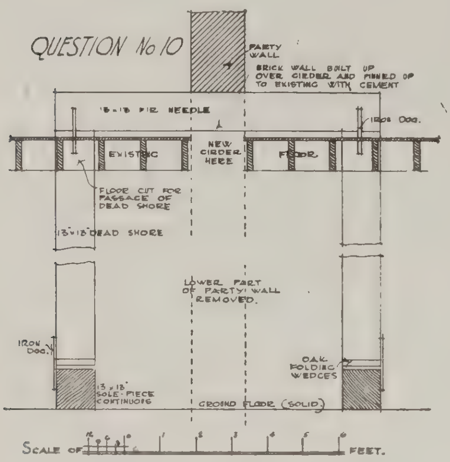
Sections should not be of greater length than 4 feet, and should be as far apart as possible when proceeding simultaneously.

Question 10.—It is to be assumed that the ground-floor portion of the party wall between two three-storey workshops has to be removed with a view to inserting a girder, and that it is proposed to carry temporarily the two upper storeys of the buildings by inserting five needles, each of which is to carry twenty tons. Make drawing to a scale of 1 inch to the foot of one needle, with its dead shores, etc.,



putting on same as many explanatory notes as possible, and figuring scantlings. Any calculations are to be clearly stated.

Answer.—See diagram.


QUESTION No 10
PARTY WALL
BRICK WALL BUILT UP OVER GIRDER AND PINNED UP TO EXISTING WITH CEMENT
13×13 FIR NEEDLE
IRON DOG.
EXISTING
NEW GIRDER HERE
FLOOR
FLOOR CUT FOR PASSAGE OF DEAD SHORE
13"×13" DEAD SHORE
LOWER PART OF PARTY WALL REMOVED.
IRON DOG.
OAK FOLDING WEDGES
13"×13" SOLE-PIECE CONTINUOUS
GROUND FLOOR (SOLID)
SCALE OF
12
6
0
1
2
3
4
5
6
FEET.

Calculations:—Shear stress on needle $= \frac{W}{2} =$ 10 tons.

Safe resistance to shearing of fir = 1 to 3 cwts. per square inch.

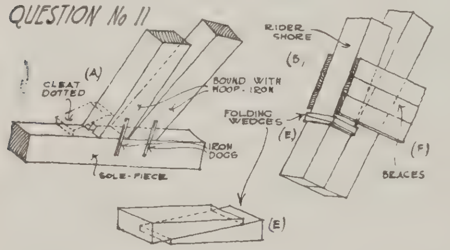
Sectional area required = 154 square inches.

Size of needles required 13 inch × 13 inch.

Question 11.—Describe, and illustrate by means of sketches where necessary, the following terms:—

(*a*) Sole-piece.
(*b*) Rider.
(*c*) Needling.
(*d*) Dead shore.
(*e*) Folding wedges.
(*f*) Braces.

Answer.—(*a*) *Sole-Piece.*—A sole-piece in a system of shoring is the plate, often embedded in the soil, on which the shores rest, and which distributes the pressure over the required area. Where the soil is soft the pressure is further distributed by resting the sole-piece on a timber platform. See sketch.



(*b*) *Rider.*—A rider shore is employed where the length of shore required exceeds the length of timber obtainable. It rests on an inner shore, and is wedged up, as sketch.

(*c*) *Needling.*—Needling is the process of inserting beams of timber or steel, called needles, through a wall. The needles are supported at the ends. See answer to Question 10.

(*a*) *Dead Shore.*—A dead shore is the timber supporting one of the ends of a needle. See answer to Question 10.

(*e*) *Folding Wedges.*—Folding wedges are used, as necessary, to drive up tightly any part of a system of shoring. See sketch, also answers to Questions 8 and 10.

(*f*) *Braces.*—Braces are the pieces of timber used to bind the various shores and the wall-piece together; they stiffen the shores considerably. See sketch, also answer to Question 8.

TUNNELS UNDER THE THAMES.

The report of the London County Council for the year ended March 31 last contains much interesting information as to the tunnels constructed under the Thames by the Council. Blackwall tunnel, which runs beneath the Thames from Blackwall to East Greenwich, was constructed by the Council under powers conferred by the Thames Tunnel (Blackwall) Acts, 1886 and 1887. The work was begun in 1892, and the tunnel was opened on May 22, 1897. The tunnel, including the approaches, is nearly 1¼ miles long, is 27 ft. in external diameter, has a carriageway 16 ft. wide with a headway varying from 17 ft. 7½ in. to 14 ft. 6 in., and two footways each 3 ft. 1½ in. wide. Access is obtained from open approaches, and in two of the four shafts there are stairways. The cost was about £1,406,000, the chief items being works £870,000, acquisition of property £355,000, and provision of sites for re-housing £83,000. The staff consists of twenty-four persons, and the cost of maintenance is about £5,100.

Greenwich Tunnel, for pedestrians only, was constructed under the Thames Tunnel (Greenwich and Millwall) Act, 1897, and was opened on August 4, 1902. The tunnel is 1,217 ft. long and 12 ft. 9 in. in external diameter, with a footway of 9 ft. and a headway varying from 9 ft. 4½ in. to 7 ft. 6 in. Entrance is provided by two shafts, 32 ft. 8 in. in diameter, in which are fitted electric lifts. These lifts begin working at 5 a.m. (Sundays at 9 a.m.) and continue until 11 p.m., and carry on an average thirteen passengers on each journey. The cost was about £180,000, the chief items being works £121,000, and acquisition of property, compensation, etc., £58,000. Current for power and lighting is obtained from the London Electric Supply Corporation. To afford direct access from the tunnel to the North Greenwich railway station and the district on the west side of the railway, a subway has been constructed under the railway line. The staff consists of eighteen persons—the average cost of maintenance is about £3,200 a year.

The construction of Rotherhithe Tunnel, between Rotherhithe and Shadwell, was authorised by the Thames Tunnel (Rotherhithe and Ratcliff) Act, 1900. An expenditure of £2,198,250 was authorised by the Act. The revised estimate of the gross cost amounted to £1,716,325, and of the net cost to £1,679,325. The tunnel, which was opened on June 12, 1908, connects Commercial Road East with Lower Road, Rotherhithe, and is 1 1-3 miles long, including the approaches. The other dimensions are as follows: External diameter, 30 ft.; internal finished diameter, 27 ft.; width of carriageway, 16 ft.; width of footways, 4 ft. 8½ in. each; headway at centre, 18 ft. 6 in.; headway at channels, 15 ft. 7 in. The external diameter is 3 ft. greater than that of Blackwall Tunnel, and the other dimensions are correspondingly increased. The four shafts are situated on the site of Dodds Place, Rotherhithe, on the river frontage near the entrance to the Surrey Commercial Docks, on the upstream side of Shadwell Fish Market, and in Broad Street, Ratcliff. The staff consists of twenty-three persons, including the superintendent. The average cost of maintenance is about £3,800 a year.

The provision of a free ferry at Woolwich was authorised by the Metropolitan Board of Works (Various Powers) Act, 1885, and the ferry was opened in March, 1889. The cost was about £192,000, of which the three ferry-boats cost £4
the acquisition of property, compens
etc., £67,081; and works of constru
£75,907. Each boat is licensed to
1,000 passengers and from fifteen to t
vehicles.

To obviate the delays caused at the
by fog, a tunnel was authorised be
North and South Woolwich. The t
is for foot passengers only.

DUTCH ARCHITECTURE
SOUTH AFRICA.

The influence of Dutch architectu
South Africa was recently the subj
an interesting lecture by Mr. J. L.
mon before the members of the Irish
at Pretoria.

He began by discussing the hom
of the pioneers in South Africa an
buildings erected by them, pointing o
simple beauty and refined style of
old homesteads, of which the p
generation may be justly proud. Th
Dutch settlers, who came to South
at a time when Dutch art was a
height of its fame, brought with the
traditions of their country, and a
means at their command were li
they were forced to keep their art s
They left to South Africa the inher
of an architecture based on simple
but of exquisite style.

The architects Simon and Adriaa
der Stel came over from Holland i
seventeenth century. They not onl
the ambition, but also the genius to
beautiful sites on which to build.
beautiful avenues and country seats
witness to this. Simon van der Ste
to contend with great difficulties.
Dutch authorities at home putting all
of obstacles in his way. But in sp
all he succeeded in realising the a
ideal of his life. The speaker com
the influence of Simon van der Stel o
forms of art in South Africa with t
Brunnelleschi on Italy in the fift
century. In many parts of Cape arc
ture he effected an harmonious com
tion of the Western civilisation of E
and the dreaminess of the Orient,
the beautiful wainscotting dividing
inner and outer halls of the Cape dwe
houses.

In this connection it is very curio
note that the Hollanders never thoug
introducing the Oriental covered stoe
the entrance to their houses, havin
stead the uncovered stoeps, merely
grown with vines to protect from th
midday sun. At first the houses we
roofed with straw, but very soon,
cities came to be built, this involve
much danger of fire, and the straw
replaced by the well-known flat plas
roofs. If bricks were used at all they
sent from Holland. These were ye
well-burnt bricks, and were
klompjes.

The wood-carving was done by wor
who came to South Africa with
Colonists. The most famous work o
Dutch architect is the Castle of Capet
The first big country seat is Groot
stantia, built by Governor Simon va
Stel, who there spent his last year
peace.

The speaker concluded by saying
the old Cape house tells a tale of
hospitality and kindness, which is no
natural in a people who, after 200 yea
unrest, persecution, insurrections,
wars, have at last found peace and r
along the cool, shady roads of the
country.

SPECIAL LEGAL REPORTS.

:laim by Builders for Work Done.

:eeble and Co., Ltd., v. Grosvenor Galleries, Ltd.

. 24. Official Referee's Court. Before Mr. Muir ckenzie.

his was an action by Messrs. Keeble Co., Ltd., builders, of Carlisle Street,), against the Grosvenor Galleries, , to recover the balance of an account work done at the Grosvenor Galleries ı February to December, 1912. The inal account was for £5,752 12s. 4d., of that four payments, amounting to- er to £4,750, had been made, leaving lance of £1,002 now sued for.

r. Hollis Walker, K.C., in opening the ntiffs' case, said that Keeble and Co. : a firm of builders, decorators, and neers, who possessed special know- e in designing and carrying out deco- 'e and furnishing work of picture eries and premises for the exhibition vorks of art. The plaintiff company as managing director Mr. Alfred est Keeble, who had charge of the : in respect of which the claim was e, and the defendants had two manag- directors, one of whom, Mr. Howard, : the chief part in the transactions, h related to work done in connection certain decorations and alterations to Grosvenor Galleries in the latter part 911. The defendants contemplated a ber of improvements, and Mr. Howard oached Messrs. Keeble and Co., ng what was wanted, he (Mr. Howard) gning the work. In December, 1911, plaintiffs sent to the defendants esti- :s for the work which had been de- d to them. Those estimates were four ımber (1) for work in the five galleries, ıe office, and in the cloak room, for 39; (2) for the basement and other ıs, £543 8s.; (3) in respect to a lift,); and (4) for heating installa- £537; making a total for the of £2,455 8s. Some discussion place with regard to the esti- :s, and ultimately the plaintiffs directed by Mr. Howard to do the . It was carried out under the per- l supervision of Mr. Keeble, the aging director, but from the first Mr. ard was making considerable altera- and additions beyond the work esti- d for, with the result that a much r amount of work was done than was ined in the estimates. On November 12, an account was sent in covering tems and totalling £5,752. On Decem- the plaintiffs wrote for a cheque. The tary, in reply, sent a cheque in part ıent, without prejudice, stating that were a number of items to which the tors took exception. A long corre- dence followed in reference to the us items of account, and certain com- ts were made as to the expedition which the work had been carried out, the result that certain items which to make up the balance were dis- l.

er the case had been heard for several counsel announced that a compro- had been arrived at under which the dants undertook to pay to the plain- £650. In order to make the compro- effective, however, it was asked that rrangement should take the form of der of the Court.

e Official Referee accordingly gave nent for the plaintiffs for £650, with

ınsel for the plaintiffs were Mr. Hollis Walker, K.C., with Mr. B. A. Cohen, and for the defendants Mr. Hudson, K.C., and Mr. Mead.

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Construction of an Arbitration Clause of a Building Agreement.

Bowen v. Welsh Garden Cities, Ltd.

April 28. Court of Appeal. Before Lord Justice Phillimore and Mr. Justice Lush.

This was an appeal by Mr. Richard Bowen, a builder, of Marble Hill, Cheltenham, against an order of Mr. Justice Coleridge in favour of the defendants, of Cardiff. It was stated that Mr. Bowen commenced an action against the defendants, claiming £672 damages for work done, for breach of contract and detention of £1,000 and asking for injunctions from alleged conversion of plant, etc. The Master decided that the case was one which should be dealt with by an arbitrator, and Mr. Justice Coleridge affirmed that order. Mr. Bowen now appealed on the ground that many of the heads of his claim were quite outside the arbitration clause in the building contract, and therefore the action should be dealt with by an official referee of the High Court. The contracts over which the dispute took place were in connection with the erection of property valued at about £22,000 at Pengam, Mon., and Highby, Norfolk.

Mr. A. Powell, K.C., argued the case for the appellant and Mr. C. Walsh, K.C., for the respondents.

After hearing Mr. Powell, the Court called upon Mr. Walsh.

Mr. Walsh strongly opposed the application that the matter should be dealt with by an official referee. The clause under which the dispute arose ran as follows: "Provided always that in case any dispute or difference shall arise between the employer or the architect on his behalf either during the progress of the works or after the determination, abandonment, or breach of contract, as to the construction of the contract, or as to any matter or anything arising thereunder, and as to the withholding by the architect of any certificate to which the contractor shall claim to be entitled, it shall be referred to arbitration."

It had been held, said counsel, that these words covered any dispute which would not have arisen had it not been for the contract. It was therefore difficult to see what point of principle it was the Court was asked to decide. The matter was one solely for the discretion of the Master, and the judge in Chambers had ruled that there was no ground for interfering.

Mr. Justice Lush said he understood that Mr. Powell contended that there were matters in issue which did not come within the contract.

Mr. Walsh dissented from this view.

Lord Justice Phillimore, in his judgment, said this was an attempt by the plaintiff to get behind the arbitration clause. All the matters in question seemed to come within the arbitration clause, and therefore he was of opinion that the appeal failed and must be dismissed with costs.

Mr. Justice Lush agreed.

Construction of a Contract: What is "And Other Material"?

Ford v. Old Wharf, Birmingham Properties, Ltd.

April 30. Court of Appeal. Before Lords Justices Buckley and Kennedy and Mr. Justice Scrutton.

This was an application of the defendants, in the action of Ford v. Old Wharf, Paradise Street (Birmingham) Properties, Ltd., for judgment or a new trial on appeal from a verdict and judgment at the trial before Mr. Justice Horridge and a special jury at Birmingham Assizes.

Mr. Vachell, K.C., and Mr. H. Maddocks appeared for the appellants, and Mr. J. F. Eales for the respondent.

Mr. Vachell, in opening the appeal, said the plaintiff was awarded £120 damages at the trial, but his submission was that the learned judge misconstrued the contract between the parties for breach of which the plaintiff brought his action. The matter arose in this way: The Old Wharf buildings were wholly demolished last year by the proprietors, the Birmingham Canal Company, who let the site to the appellants. At one part there was an approach or pavement laid with granite setts, and they remained after the demolition of the premises. They did not pass with the lease, but a contract was entered into between the appellants and Mr. Alfred Ford, a contractor, for the removal of the soil, bricks, etc., in the approach, but the right was reserved to the Canal Company to remove certain of the remaining stuff at their leisure. Mr. Ford was to be paid so much per cubic yard for the removal of what he excavated, and while this work was going on the Canal Company stepped in and removed some of the setts. Mr. Ford claimed that by his agreement he was entitled to the setts, and he sued the appellants. He submitted that there was no sale to the respondent of the granite setts, and therefore there was no breach of contract. There was no evidence of warranty of title. The agreement mentioned the removal of sand, brick, gravel, etc.

Lord Justice Kennedy: Does not it go on, "and other material"?

Mr. Vachell: Yes.

Lord Justice Kennedy: That might include setts.

Mr. Vachell said if it were intended that Mr. Ford was to have the setts they would have been mentioned, because they were more valuable than what was specified. "And other material" meant similar material to that specified. The learned judge, in saying there was a sale here was wrong, because there was no sale of goods, therefore there could not be an implied warranty.

Replying to Lord Justice Kennedy, Mr. Vachell said the setts never passed to the appellants. They were to remain there until they were removed by the Canal Company.

Lord Justice Kennedy: The lease to the appellants was for ninety-nine years. Were they to keep the setts there for that time in case the Canal Company wished to remove them?

Mr. Vachell said he supposed that would be so. In the contract with Mr. Ford there was nothing that vested any of the property in him.

Mr. Eales, for the respondent, said by the agreement it was stipulated that Mr. Ford was to store the sand excavated on the premises. All the other materials found on the site were to be removed by Ford, and therefore to become his property. That was the proper construction to put upon the agreement, according to the intention of the parties that the respondent was to have the property in the goods he removed.

Lord Justice Buckley, in delivering judgment, said the first question he would decide was whether all the soil, etc., except the sand, were to become contractually the property of the contractor Ford, and that question must be answered in the affirmative. Whatever the agreement between the appellants and the Canal Company was, was not in the question, and the only way for them to settle their difference would be at the end of the ninety-nine years' lease for some person on behalf of the Canal Company to require the appellants to replace the granite setts. The appeal would therefore be dismissed.

Lord Justice Kennedy considered that the rights of the parties had not been considered in their true light, and that there should be a new trial.

Mr. Justice Scrutton agreed with Lord Justice Buckley, and by a majority of the Court the appeal was dismissed with costs.

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Construction of a Covenant: Question of Elevation or Architectural Decoration.

Joseph v. The London County Council.

April 30 Chancery Division. Before Mr. Justice Astbury.

The question raised in this action was whether electric light advertisements affixed to Piccadilly Mansions, Shaftesbury Avenue, constituted an alteration in the elevation of the buildings or in the architectural decoration in breach of a covenant contained in a lease granted by the London County Council in 1889 to a predecessor in title of the plaintiff for a term of eighty years. The Council contended that the installation had caused such an alteration, whilst the lessee said it had not.

The advertisement in question consisted of a framework of light iron, vertical and horizontal bars bolted together in the form of a wide-meshed net, to which the letters of the advertisement, made of wood and fitted with electric lights, were affixed. The whole framework was suspended from the upper part of the premises by steel bands, none of which were affixed to the structure of the building, but embraced the ornamental steel work on the top of the façade. Struts resting on the stone cornices further supported the vertical bars.

Mr. F. Russell, K.C., and Mr. Underhill appeared for the plaintiff, and Sir Charles Macnaghten, K.C., and Mr. F. L. Wright for the defendants.

Mr. Russell submitted that the covenant was directed against any alteration affecting the fabric of the building. If the contention of the Council was that the covenant preserved the æsthetic appearance of the building, the lessee would be prohibited from putting up a flag or putting out window boxes.

His Lordship: It is not particularly an æsthetic neighbourhood.

Mr. Russell: No, it is a business and amusement neighbourhood. Counsel conceived that if the lessors' view was right the tenants could not decorate their premises if the King in procession passed along.

Sir Charles Macnaghten submitted that if his learned friend were right he would be entitled to board up the whole of the building and cover it with advertisements or with posters, or whatever he was minded to do. The present lessor paid £1,520 ground-rent, but counsel could imagine an advertising genius paying a great deal more than that.

His lordship, in giving judgment, said that if the prohibition applied to any alteration in the appearance of the building he saw no limit to be placed upon it, or any means of arriving at a limit. He thought the covenant must be held to relate to the fabric of the building and not merely to alterations in its appearance by temporary advertisements on frameworks hung outside, which could be removed at any time with a few hours' labour. For these reasons he held that the advertisement was not a breach of the covenant, and he made a declaration to that effect.

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Responsibility for Electric Light Installation.

Secretary of State for War v. Kirkland and Capper and Woodd.

May 1. King's Bench Division. Before Mr. Justice Lawrence.

This was an action by the Secretary of State for War against Messrs. Kirkland and Capper, electrical engineers, of Victoria Street, Westminster, and Mr. J. H. T. Woodd, architect, of Broad Sanctuary Chambers, Tothill Street, Westminster, to recover damages in connection with the supervision of certain electrical works at the New Medical Staff College and Laboratory at Millbank, which have been erected by the War Office.

The Solicitor-General, Sir S. Buckmaster, K.C., Mr. Gordon Hewart, K.C., and Mr. Brandon appeared for the Secretary of State for War; Mr. Walter, K.C., and Mr. Blanco White for Messrs. Kirkland and Capper; and Mr. Shearman, K.C., and Mr. E. Hills for Mr. Woodd.

It appeared that Mr. I. H. T. Woodd was engaged as architect of the new Medical Staff College and Laboratory which the War Office put up at Millbank at a commission of 5 per cent., and it was contended that it was his duty to superintend the whole of the works, including the installation of lighting, but the contract expressly provided that the lighting work should be placed in the hands of experts. The defendants Messrs. Kirkland and Capper, were employed by the War Office to supervise the electrical lighting of the building. Plaintiffs alleged it was stipulated that in wiring the building lead-covered wire should only be used in cases where the wires were passed through cornices, mouldings, or walls, and the complaint of the War Office was that the defendants had approved of the wiring of this building throughout with these lead-covered wires. A further ground of complaint put forward was that the wires were hidden in plaster. Plaintiffs alleged that the whole wiring work was found to be unsatisfactory, and that the certificate for payment for the work was negligently given. The plaintiffs contended that there was here a clear case of negligence against the defendants as supervisors.

Mr. Walter denied that there had been any negligence on the part of his clients, and asserted that the trouble was caused by interference with the work after it was done.

Mr. Shearman, on behalf of Mr. Woodd, totally denied negligence. His client was architect for the building and the contract provided for the electric lighting to be placed in the hands of experts. His client submitted that he was not responsible for the electric lighting, except so far as seeing that the electric-light work did not interfere with the proper building of the college. He was entitled to give instructions to the engineers in so far as it assured no interference with the building. Electrical experts were employed, and his client's position was that he was the architect and they were the engineers. It was no
client's business to be an electrician.
charge of professional negligence coul
maintained against Mr. Woodd.
was an attempt, said counsel, to pu
his client work for which he was not
and to blame him for not supervisi
contract when there was no power ir
contract given to him to supervise.

Among the many witnesses called w
For the plaintiffs, Mr. Allan Kirk and
William Henry Patchell, electrical
gineers; and for Mr. Woodd, Mr. Ar
Blomfield, F.R.I.B.A., Mr. Keith Do
Young, F.R.I.B.A., and Mr. Ernest J
Brown, President of the Institute
Builders.

His lordship, in giving judgment,
the tender of the firm of specialist con
tors for the lighting work was accepted
specification being prepared by Kirk
and Capper. The work was complete
May, 1907, and in February, 1908, se
complaints were made of the installa
Upon consideration of the speci
tion his lordship held that bur
lead-covered wires in plaster was not
missible under it, and that this was o
the main contributory causes of the
fects in regard to which this action
brought. The next head of complaint
that the supervision of the work of wi
was negligent and insufficient. That
peared to be true. His lordship thoug
was too late for the plaintiffs to rely
the terms of the specification as a gr
for rejecting the whole installa
Having regard to the time that
elapsed, his lordship said he was bour
limit the damages to the cost of re-in
ing in an approved method the cir
which were found to have failed upon
joint test in January, 1910, less thos
the schedule of circuits interfered wit
the Royal Engineers. The cost of r
stating these defective circuits was
true measure of damages, and if the pa
could not agree upon an amount it
be referred to an official referee to find
cost of such re-instating.

Judgment was entered for the plai
for the amount so agreed or found ag
both sets of defendants, and with cost

[The hearing of this case was concl
on April 23, when the judgment
marised above was reserved.]

TRADE AND CRAFT.

———

"Fireplace Suites."

Under the above title the Carron
pany have recently issued a new catal
containing about eighty photographi
productions of firegrates and mantelp
of various types. The designs are e
lent throughout. Many of the exam
shown are based on old models,
others have been specially designed by
Carron Company. Since the acquis
of the business of Longden and Co.,
Carron Company have considerably
mented their fine collection of mo
which embrace many authentic exam
of Elizabethan, Jacobean, Queen A
Georgian, Chippendale, Adam, L
XV. and XVI., Empire, and other per
Many of the firegrates are taken
original wood carvings executed during
eighteenth century by William and H
Haworth, who were students of the R
Academy during the presidency of
Joshua Reynolds. The catalogue is
of unusual architectural interest,
should find a place in every archit
office.

Fire Bricks and Fire Clays.

an interesting catalogue containing
ıred and other illustrations, Messrs.
. Sankey and Son, Ltd., whose head
is at Essex Wharf, Canning Town,
describe and figure their various
ds of fire bricks, as well as lumps,
seating blocks, bridge blocks, retorts,
linings, grate and stove linings, fire
nt, and other specialities. In each
the special applicability of the brick
her object is usefully indicated. For
ıple, it is noted that the "Light"
is but half the weight of the ordinary
ay brick, and is supplied to torpedo
, and for other services where weight
consideration; Sankey's "Castle-
" brick is most suitable for cupolas
where heat is intense and intermit-
the "Blue," the "Ganister," the
ıas," and other brands have special
ties, such as resistance to fluxes;
the "Pure Silica" firebrick is a
al patent brick, infusible and un-
ed in the most intense clean heat.
uma" plastic fire cement is recom-
ed by the firm for setting all kinds of
ick work, this material being very
oof, and binding the bricks together
mly that they cannot possibly work
It is a plastic fire cement, always
for use, as it does not require the
on of water, and, setting as hard as
ınd cement, it resists the highest
ratures. Hence its utility for set-
nd repairing every description of fire-
work in kilns, furnaces, stoves,
, ranges, ovens, flues, etc., for joint-
ue pipes and setting coppers, and so
eaters and flue covers which meet
quirements of the largest boiler in-
ce companies are, like all the other
that appear in the list, made of any
size or shape to order, and various
ns are kept in stock. The firm are
o point to sixty years of experience
rogress in the manufacture and sale
bricks and fireclays.

A Test of Pudlo.

certificate of the Institute of
ne has recently been awarded to the
s of Pudlo. This material was
analytically, bacteriologically, and
ally in the laboratories of the insti-
and no objectionable features were
ered. The substance in a 2 per
nixture was found quite impervious
er, and the waterproofing qualities
dlo were fully demonstrated. The
says: "It (Pudlo) appears to have
tive antiseptic properties, and far
harbouring germs tends to destroy
"

A Booklet on Safes.

twenty-four-page booklet, entitled
Record of Faithful Service," which
s' Safe Company, Ltd., have re-
published, is given a quantity of
ting photographic and documentary
e of the fireproof and burglar-proof
s of the Milner safe. Between 200
o Milner safes are sold every week
stributed over all parts of the globe.

rced Concrete at British Museum Extension.

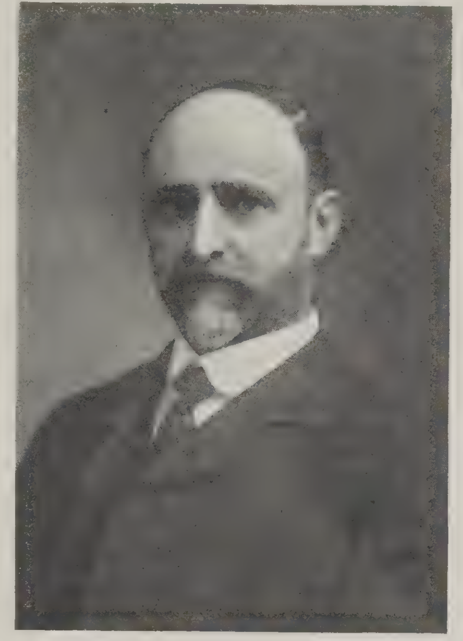
interesting pamphlet on the rein-
concrete work at the British
n extension, opened last week by
g, has been issued by the Expanded
ompany, Ltd., whose systems were
ed in the internal construction.
rt description of the building and a
graphical particulars of the archi-
given on page 337.

OBITUARY.

Mr. Thomas H. Holloway.

We greatly regret to have to record the death at Clapham, on Friday morning last, of Mr. Thomas H. Holloway, the eminent builder.

Mr. Holloway's father, the late Thomas Holloway, of West Lavington, near Devizes, started a contractor's business in London in a modest way about fifty-six years ago, which has developed into one of the largest in London. The firm have built the new Admiralty buildings, the new Central Criminal Court buildings, the new General Post Office, and several large blocks of business buildings, and they are at present building the new Government offices in George Street, Westminster. In 1905, when Lord Churchill sold his West Lavington Estate, Mr. Holloway bought the manor and the greater part of the village of West Lavington, his native place, for £33,000, and last year he added to that property the adjoining estate of the Ecclesiastical Commissioners, some 3,500 acres in extent. He did much to improve the cottages and buildings on his property, and to make the village one of the most happy and prosperous in Wiltshire. Mr. Holloway and his brother erected at Littleton a chapel in memory of their father.



THE LATE MR. THOMAS H. HOLLOWAY.

Mr. Holloway leaves a widow and eight children, two of his three sons being engaged in the business.

COMPETITIONS.

Paddington Central Baths.

Mr. Leonard Stokes, the assessor in the above competition (which was limited to six firms of architects), has made the following awards: £100, Mr. Harold Burgess, Westminster; £75, Mr. Herbert Shepherd; £50, Mr. J. E. Franck. The buildings are estimated to cost £41,000.

St. Paul's Bridge.

The competition for the design and treatment of the new St. Paul's Bridge closed last week, and the Bridge House Estates Committee of the Corporation have met to consider the forty sets of designs submitted. The award of the assessor (Sir William Emerson) is expected early in June. The estimated cost of the work is £1,646,000.

Town Hall, etc., Dudley.

Dudley Town Council have decided to invite architects practising within 150 miles of the town to submit competitive designs for a new town hall, police buildings, and municipal buildings, to cost £40,000. An assessor will be appointed by the President of the R.I.B.A.

Museum and Art Gallery, Belfast.

We regret that an error occurred in the announcement of the result of the above competition in last week's issue. The third prize was awarded not to Mr. T. S. Lawson, as stated, but to Messrs. Tait, Savage and Lawson.

IN PARLIAMENT.

(*By Our Press Gallery Representative.*)

The Budget.

In the course of his Budget statement last week, Mr. Lloyd George said that the Government were of opinion that a national system of valuation for local taxation must be set up. They proposed that this valuation should be the valuation on the assessment of the real value of the property, separating the sites from the improvements. There was no intention to transfer the whole burden from the composite subject of site and hereditament to the site, but they did intend that the taxation of the site value should henceforth form an integral part of the system of local taxation. The machinery had been set up and the staff had been organised in every centre. Another important announcement with regard to the maintenance of roads was made by the Chancellor. Under the system of Imperial grants to local taxation, the Exchequer will bear the cost of one half of the expenditure on first-class or main roads and one-fourth of the expenditure on second-class roads. The third-class or district roads will not receive any Imperial grant. The classification of the roads is to be left to the Road Board.

Adviser to Delhi Architects.

Mr. King asked whether the vacancy caused by the retirement of Sir Swinton Jacob as adviser to the new Delhi architects in matters relating to Indian craftsmanship had been or would be filled up.

Mr. Chas. Roberts, the Under-Secretary for India, stated in reply that a successor to Sir Swinton Jacob had not been appointed, but when work at Delhi was further advanced, the establishment of a school of Indian craftsmen under Indian guidance, to work in connection with the architects, was the probable form that the action of the Government of India would take.

Mr. King asked whether the Secretary of State adhered to the principle laid down by his predecessors, that Government schools of art in India existed for the promotion of Indian art, and whether the qualifications of Indian teachers had been fully considered in appointments to the staffs of those schools which came under his patronage.

Mr. Charles Roberts said the answer to the first question was in the affirmative, on the understanding that Indian art included applied design and industrial art. The Secretary of State appointed to Indian art schools only in cases where the Indian Government was not able to find in India persons with the required qualifications. He had no reason to suppose that the qualifications of Indian teachers were in such cases overlooked.

The Smoke Nuisance.

Lord Alexander Thynne asked whether in view of the number of resolutions passed by local authorities urging the necessity for further legislation to reduce the amount of smoke emitted by chimneys and furnaces it was the intention of the Government to afford an opportunity for the discussion of the question at an early date.

Mr. Herbert Samuel stated that he was about to appoint a Committee to consider the question of smoke abatement, and it did not appear necessary to take the course suggested.

The names of the Committee which has been appointed since the above reply was given, are as follow:

The Right Hon. Russell Rea, M.P.;
H. Brevitt, Esq., Town Clerk of Wolverhampton;
Professor J. B. Cohen, F.R.S.;
Colonel H. Hughes, C.B., C.M.G., a former Lord Mayor of Sheffield;
J. F. MacCabe, Esq., an Inspector under the Local Government Board for Ireland;
The Right Hon. Lord Newton;
Captain H. R. Sankey, late of the Royal Engineers;
B. Duncomb Sells, Esq., General Manager of the Machinery Users' Association;
P. C. Simmons, Esq., a member of the London County Council;
E. D. Simon, Esq., a member of the firm of Henry Simon, Ltd., of Manchester;
Bailie W. B. Smith, a member of the Glasgow Corporation;
H. O. Stutchbury, Esq., a principal clerk of the Local Government Board;
Christopher Turner, Esq. and
Sir Aston Webb, C.B., C.V.O.,
with E. A. Faunch, Esq., of the Local Government Board, as secretary.

PROJECTED NEW WORKS.

Church, Southgate (Yorks).

Plans have been approved, at Elland, for a new United Methodist Church, proposed to be erected at Southgate.

Pavilion, Meriden.

Meriden R.D.C. has approved plans of a new pavilion for Birmingham Corporation at Castle Bromwich playing fields.

Pier Widening, Brighton.

Brighton Town Council are considering plans submitted by the Palace Pier Company for widening a portion of the structure from 60 ft. to 108 ft. to enable the bandstand to be extended. It is understood that the cost will be about £20,000.

Hotel Alterations, Barrow.

The North Lonsdale justices have sanctioned certain alterations to the Lake Side Hotel, Barrow.

Infirmary, Bromley.

At the last meeting of the Bromley Guardians the committee appointed in connection with the proposed new infirmary reported that they had considered the plans prepared by the architect (Mr. F. Danby Smith), which they approved. The proposals make provision for a building consisting of a central administrative block with kitchen and stores in the rear, and a main corridor leading to several ward blocks in which there would be accommodation for 160 patients. The estimated cost of the buildings is £39,107.

University Buildings for Cardiff.

The Governors of the South Wales and Monmouthshire University College at Cardiff have received and accepted the generous offer of an anonymous donor to provide funds for the erection of a great school of preventive medicine. This gift, together with that of Sir William James Thomas, a Welsh coalowner, to erect a school for other branches of medicine in connection with the college, will provide Cardiff with one of the finest and most up-to-date medical schools in the kingdom. The money value of the two gifts is estimated at £180,000.

Buildings in Aberdeen.

The Plans Committee of Aberdeen Town Council have passed the plans of the following new buildings: Garage in connection with No. 361, Great Western Road, for James B. Craigen (William Beattie, architect); alterations in connection with St. Luke's, Kepplestone, for Lady Reid (Kelly and Nicol, architects); three dwelling-houses on the north side of Brunswick Place, for Joseph Shirras and Son, builders (George Watt, architect); alterations in connection with shop, 44, Victoria Road, for the Maypole Dairy Company, Ltd. (James Wilson, Glasgow); store on south side of Crombie Road, for William Fiddes and Son, Ltd. (Wilsons and Walker, architects); reconstruction of premises on the west side of Harriet Street, for Mitchell and Muil, Ltd. (Wilsons and Walker, architects); garage, 38, Fonthill Road, for Alexander Stephen (Harvey Mennie, architect); alterations, 154a, Union Street, for the West End Café Company, Ltd. (Kelly and Nicol, architects); new roof and other alterations, engine works at York Street, Wellington Street, and St. Clement Street, for Hall, Russell and Co., Ltd. (A. H. L. Mackinnon, architect); alterations, Grand Hotel, Union Terrace (Davidson and Garden, advocates); additions and alterations, 30-34, St. Nicholas Street, for James Kinghorn and Son (George B. Mitchell, architect); alterations and additions, La Scala Picture House, Union Street, for Behar and Baxter, Glasgow, and Henry Ross, Aberdeen.

London.

Subject to compliance with certai
cified conditions, consent has been
by the L.C.C. to the execution of t
lowing works:

Clapham.—Alterations at 6, Old
Clapham, on the application of
and Searle, on behalf of A. D. Len

Islington, North.—Addition to a
shop at Good Intent Works, Eaton
Islington, on the application
Cousins.

Lewisham.—House on the north
and a house on the south side of new
to lead from Burnt Ash Hill to
Lane, Lee, on the application of G.
down and Brown, on behalf of
Scudamore and Sons.

Limehouse.—Building at Ke
Wharf, Narrow Street, Limehouse,
application of Lovegrove and Papw

Marylebone, West.—Enclosed
way, connecting the premises of Sp
Turner and Boldero, over Duke's
Lisson Grove, on the application
Hudson.

St. Pancras, East.—Extension of
Road power house to abut upon the
eastern side of Great College Stre
Pancras, on the application of
Baynes on behalf of the St. P
Metropolitan Borough Council.

Southwark, West.—Four gangway
Winchester Passage, Stoney
Southwark, to connect premises in
pation of Gordon, Coombe and C
the application of H. Langston an
on behalf of the Borough Market

Woolwich.—Porches and bay wi
at 1, 2, 3, 4 and 6, Myra Street.
stead, on the application of W. Wri

THE LONDON LABOUR TRO

At the time of going to press th
look with respect to the London
trouble is by no means reassuring.
unionists having rejected the ter
settlement proposed by the Nationa
ciliation Board, the responsibility f
longing the dispute clearly rests wi
men. On the other hand, the L
Master Builders' Association, by sig
their willingness to accept the board
posals as a basis of agreement, have
fested a conciliatory spirit which, if
rightly reciprocated, should at once
the dispute to a termination. The
however, two points of principle wh
employers very properly refuse to sa
They justly claim that they are enti
be safeguarded against a recurre
flagitious breaches of agreement s
those which provoked the lockout a
at the very root of all the trouble, an
will at all hazards maintain their r
make no distinction between union
non-unionist men. At a meeting
National Federation Council on M
a general lockout was recommended
event of a further joint conference p
fruitless.

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ELECTRICAL NOTES.

The I.E.E.

At the moment of writing the ballot papers for ordinary members of the Council of the Institution of Electrical Engineers have not been sent in, or are not due to be returned, but the situation in regard to the election of eight names is somewhat piquant. It has been the custom for many years for the members to vote for the nominees of the Council, or to take no part in the election and to accept the official nominations. Of late, however, there has been manifested a certain restiveness, born of dissatisfaction with the Council's policy or want of it in regard to commercial or practical matters in connection with the industry. This year the Council nominated, as usual, eight names to replace those members who were retiring, and certain ordinary members have taken it upon themselves, under their constitutional rights, to nominate four other names. Great efforts are being made to secure their election, whilst the eight nominees of the Council have been whittled down to three, and members are being urged to vote for these seven, as representing the most practical selection that could be made in the time at disposal. When Mr. S. Z. de Ferranti was the President, during a period of two years, he endeavoured to instil some life into the institution, and amongst other things he was instrumental in having appointed a so-called Industrial Committee, whose duties were to consider and propose remedies for the general improvement of the commercial position of the industry, etc. This committee has apparently done very little, if anything, and recently it was dissolved, to the great surprise and dissatisfaction of those who hoped for material results. For some reason or other the I.E.E. has always been governed by a more or less academical majority, possibly because practical men had no time to give to serve on the Council, because if they did serve they gradually evolved into the academical type, or were overruled by the majority, but more probably because the academical portion always nominated their own kind and the members had not sufficient *esprit de corps* to organise any opposition. However, a new spirit seems to be rising, and whilst members only had themselves to thank for the past conditions, it rests with them now to change these for the better.

Inexpensive Semi-Indirect Fittings.

The popularity of semi-indirect lighting is rapidly increasing, and there is at the present moment a considerable demand for well-designed fittings embodying this principle, especially for picture theatres and public halls.

Semi-indirect lighting was evolved primarily as a means of eliminating glare and producing a soft, diffused illumination, but the demand for semi-indirect units is by no means confined to those people who select their electric light fittings on scientific grounds.

The British Thomson-Houston Company, who have done a great deal to introduce both semi-indirect and indirect lighting in this country, have now developed a very considerable range of fittings for the former system. Two of the most recent designs are interesting, not only because of their effectiveness and beauty, but also because of their relatively low prices, which bring semi-indirect lighting within reach of those who have
viously found it too expensive.

One of these fittings consists of
chains, a ceiling plate, and a ring to
port the opal bowl. The fitting, alth
plain and simple, is of graceful and
tive design, and would not be out of
in the most artistic interior. These
bowl semi-indirect fittings are made
single lamps, or for clusters of fou
six, and in diameters ranging from
to 19 in.

The other fitting employs a Ve
hemisphere reflector bowl, and is
either with central chain or tube sus
sion. The glassware is held by mean
thumbscrews on three arms radia
from the central suspension. Ve
hemisphere fittings are supplied in va
diameters to take single lamps of
30 to 400 watts.

Middlesex Road Scheme.

A Committee of the House of Com
is considering the Middlesex County C
cil Bill, of which the principal object
obtain authority to construct a new
about five miles long and 80 ft. wide
ginning with a junction with the
Road in Chiswick, passing through B
ford, Osterley, Lampton, and Heston,
the main Bath Road. The cost is
mated at £502,809, of which the
Board has undertaken to provide 75
cent. Power is sought to preven
owners of public-service vehicles using
proposed road without the consent of
council, the object being to require
owners of motor omnibuses to contr
towards the maintenance of the road
they are allowed to use it.

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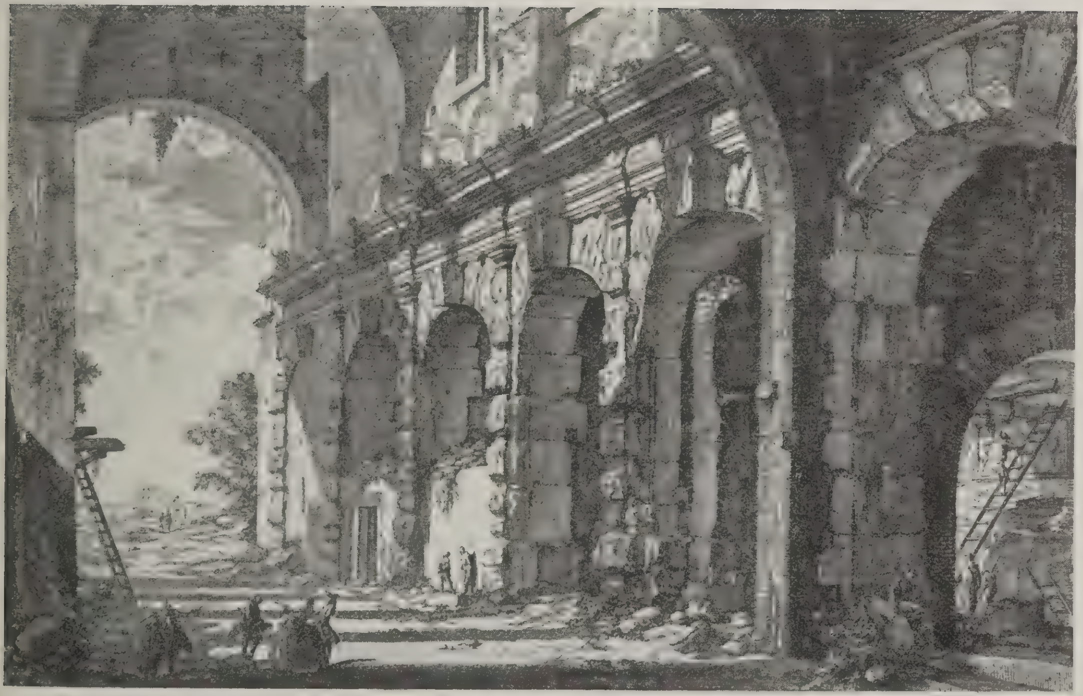
No. 85.



(From Piranesi.)

THE ARCHITECTS' & BUILDERS' JOURNAL.

MAY 20, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1011.

The Debate on the Register.

FROM the official report in the "Journal of the Royal Institute of British Architects" of the debate on "Registration by Charter," which took place on the evening of April 27 last, two salient factors emerge. The one is the very natural determination of the Institute to retain absolute control of the Register they are hoping to establish by charter; the other is their anxiety to extend the utmost fairness possible to those architects who have no connection with the Institute, but who, nevertheless, constitute a considerable and not unimportant section of the profession. These factors became evident in the discussion that followed Mr. S. Douglas Topley's speech in support of his amendment to Clause 7 of the scheme before the meeting. A well-expressed plea on behalf of the "extra-mural" architects, as one speaker happily described them, Mr. Topley's speech did much more than merely put forward one side of a thorny and difficult argument; it elicited also from the President and from Sir Aston Webb expressions of sympathy with the idea of "extra-mural" representation, which, qualified as they were, are important as indicating a desire to satisfy the profession as a whole, that has not exactly been manifested in the earlier phases of this campaign. Clause 7 reads as follows: "The Register to be administered by a Standing Committee of the R.I.B.A., whose functions shall be limited to supervision of the Register, to investigation of complaints in regard to the professional conduct of any person on the Register, and to reporting to the Council of the R.I.B.A. on matters connected with the Register only. The Committee's powers to be limited to reporting to the Council, by whom the required action will be taken." Mr. Topley moved: "That the Register be controlled by a Registration Board composed of twenty-one architects elected periodically by and from those whose names appear on the Register, not less than eleven being corporate members of the R.I.B.A." The aim of his proposal was that the committee administering the proposed Register shall represent every type of architect who may come on to the Register under Clause 3; and not only were these architects to be represented, but they must possess some executive power; the Register must be controlled by the suggested Board. At the same time the Institute must remain the "top-dog," and this would be guaranteed by its possessing a majority on the Board. The fallacy in the argument from the Institute's point of view is self-evident, and subsequent speakers were not slow in seizing upon it. There would be, as Mr. J. A. Gotch said, two bodies governing the architectural profession —the Institute and the Registration Board. There would be set up an *imperium in imperio.* Furthermore, the constitution of such a body with independent control would stultify the entire Registration proposals, which originated with the assumption that it was the function of the Institute to constitute and maintain a Register of Architects through its Council. It was useless for Mr. Topley to assert that the Institute would remain "top-dog" all through by virtue of its initial majority on the Board, when a majority of the
Board could, under his scheme, run counter to
wishes of the Council representing the Institute.
Board "would have the morality of the registe
architects under its care, and the Institute would h
the morality of its members under its care, and i
conceivable there might be two standards of pro
sional conduct set up." In this wise the official op
sition to the amendment as it stood expressed its
Yet, as we have already said, Mr. Blomfield's attit
towards it was conciliatory. "Sir Aston Webb s
and I agree with him, and I think the Council will
agree, that some representation of what Mr. Wa
described as the extra-mural architect was desira
on this Standing Committee, and that is, to me, a
fair proposal, and I think it a matter which
Council should consider and try to draw up fresh
posals to meet." But the Council of the Institute n
have the last word on Registration as on all o
matters within its sphere of action. That was the
basis of negotiations.

We have tried to indicate in the foregoing senter
the trend of the debate, and to suggest how far
Council are prepared to go towards meeting the vi
of those who consider that their scheme of Registra
by charter is selfish and arrogant. Frankly, we do
see how, on this occasion, it could have gone furt
The debate, it must be remembered, was larg
academic, in so far as the Institute met, not to acc
or reject the scheme, but to discuss it; the
struggle, if any, will come when the scheme co
back from the Privy Council with its clauses amen
perhaps mutilated, in accordance with the views of
tribunal. With the consciousness of the Privy Cou
looming ahead of them, with its infinite potential
for improving or marring any scheme they m
submit, the Council probably felt that to commit th
selves to anything more definite than an accepta
of certain principles might involve them in ser
difficulties with the members if their arrangem
were subsequently upset. But that is not all.
Council's position is a peculiarly difficult one at
juncture. They have a duty to the Institute, to w
they are directly responsible, and a duty to the
fession to whom they are responsible in
scarcely less degree. It is idle to say that
they do their duty to the Institute they
doing it to the profession; it may be so;
in the eyes of a very large number of architects, in
and outside the Institute itself, the duties have bec
quite separate duties. Now, the scheme as it sta
appears to us to fulfil one duty well enough—tha
the Institute; but that it does not appear to o
people to fulfil the other duty as adequately is evi
from the discontent at its provisions which was vo
in the course of this debate. On the whole, then,
not difficult to account for the Council's relucta
either to emphasise, to rub in, the top-dog po
always and everywhere, or to proceed otherwise t
with extreme cautiousness in the direction of con
sions to the "extra-mural" element. This, ag
explains the tentative character of the whole de
and what may seem its inconclusiveness. There
for example, a disposition on the part of some of

kers to shelter behind what the Privy Council ht do; to decline to accept an amendment on the that they thought that the Privy Council would accept it. Again, the question of the Licentiates left as nebulous as ever, although the speeches dying the Associates' view of their own privileges not wanting in directness and vigour; "these are ult matters, and we should be fresher when we ss them," said Mr. Newton, and promptly moved djournment. Nor was the future policy of the tute with regard to statutory Registration much dated. "It would depend on the course of events," the President. If the present scheme answered urpose it would not be necessary to do anything . One scents in this the air of many controversies me; for it is well known that a large proportion of nstitute's members regard statutory Registration e ultimate goal, and the proposals to proceed by er only as a stepping-stone thereto.

everybody is to be satisfied there would seem, d, amendments enough in front of the Council's ne. But this debate should assuredly help the ne on its way. The tone on both sides was, on hole, one of sweet reasonableness, from the digni- nd yet conciliatory opening remarks of the Presi- to the give-and-take discussion on Mr. Topley's h. The debate settled little or nothing in regard e really vital questions with which it was con- d; it might almost be said merely to have tled the terms of some of the provisions in the ne. But the spirit of give-and-take that it dis- d was excellent, and full of good augury for the ate success of a device for regularising profes- l practice that have seemed to us of late to ten a rift in the ranks of those whom it seeks to .

F. M.

The Many-sided Architect.

magnify one's office is a pardonable lapse from modesty, and the habit is easily condoned on the understanding that the claim is subject to dis- . Thus, when a lecturer before the Concrete ute said, the other evening, that "the modern tect had to be a man of many parts, a jack-of-all- s — a bricklayer, mason, carpenter, joiner, ber, and painter, always an artist, often a lawyer, ast, but not least, a structural engineer"—every- recognised that this was merely a broad gene- tion, by no means to be taken literally, but merely rhetorical indication of the architect's ever- nding horizon and constantly increasing respon- ies. It had been wise, perhaps, to omit the atory expression "jack-of-all-trades," which has uliarly obnoxious corollary. As to trades, it may e that an architect is "master of none," for no should be asked of him than that he shall be a r in his profession—that he shall know whether t he is well served in these miscellanies. That this conception of the architect's functions may ished too far has been of late made painfully est in the law-courts. In fairness, the legal nsibilities of an architect should be restricted to rs which are indubitably within his province; boundaries are in considerable need of clearer tion and delimitation. That object is not greatly nced by reiterating the claim that an architect d be as multifarious as Sir W. S. Gilbert's rly naval man," who had swallowed up the rest crew of the "Nancy Bell"; the truth being that rchitect should enjoy no less liberty than the r, the doctor, and the theologian to follow his articular bent in a profession that affords as scope as any other for special aptitude or dual inclination, and that moreover the "general tioner" should be relieved of undue responsibility a specialist is called in.

Asylum Chapels.

IT would appear, from the tone of a discussion at a meeting of the West Riding Asylums Board, at Wakefield, that if the Home Secretary decides in favour of providing specially built chapels for asylums, the local authority will have the honour to disagree with him, and that they will be strongly supported in this attitude is evident from communications they have received from various boards of guardians expressing "grave concern" at the request for chapels. Clearly the point is of practical importance for architects, who will await with much interest the upshot of the controversy.

The Building Trade Crisis.

A MOMENTOUS conference between the London Master Builders' Association and representatives of the trade unions involved in the dispute, was opened on Friday last at the Holborn Restaurant, with the object of arriving at terms of settlement. The conference sat until nearly ten o'clock at night, and was then adjourned until Monday. What occurred at the adjourned meeting will be found recorded, so far as it can be ascertained at the latest moment of going to press, in another part of the present issue, page 364. We understand that at the conference on Friday the employers stood firm to the recommendations of the National Board of Conciliation; these recommendations having been rejected by the men in a ballot which, the employers aver, was so conducted that it could not be regarded as representing the real opinion of the men. The position, therefore, on Friday, was that, in accordance with the recommendations of the National Conciliation Board, a general lockout would ensue ten days after the failure of the conference to arrive at a settlement of the London dispute.

Circulation Figures.

WE have already made reference in these columns to the important matter of circulation figures, but our contemporary the "Building News" has not, so far, acted on our suggestion. In order that there may be no misunderstanding as to the point at issue, we would again set out our reasons for taking up the matter. For many years the "Building News" has circulated a statement that it is "the leading journal of the profession, and has the largest sale of any professional journal published." Our contributor "Ubique," who first drew attention to the subject, pointed out that such a statement must not be made unless it is supported by proofs, the only satisfactory evidence being that afforded by the actual sale figures. The circulation of THE ARCHITECTS' AND BUILDERS' JOURNAL has so increased under the present proprietorship, and the Journal has shown such vitality, that we feel we are justified in challenging our contemporary's claim. We are firmly of opinion that the nett sale of THE ARCHITECTS' AND BUILDERS' JOURNAL is far larger than that of the "Building News," and that our paper is much the more widely read. In the absence of any positive means of compelling a publication to disclose its circulation, such a statement as that made by our contemporary may be regarded as fairly safe until some other publication feels itself strong enough to challenge it, as we now do. Our challenge is—that, in justification of their claim, the "Building News" shall disclose a statement of their nett sales certified by an independent firm of auditors, we giving a public undertaking to adopt a similar course, and to publish the results in this Journal. We trust there will be no hesitation on the part of the "Building News" in acceding to our suggestion, as we are sure that not only the readers, but also the advertisers of both publications will be greatly interested in the comparison.

MODERN ARCHITECTS:—II. ALEXANDER ("GREEK") THOMSON

(*Continued from* p. 336.)

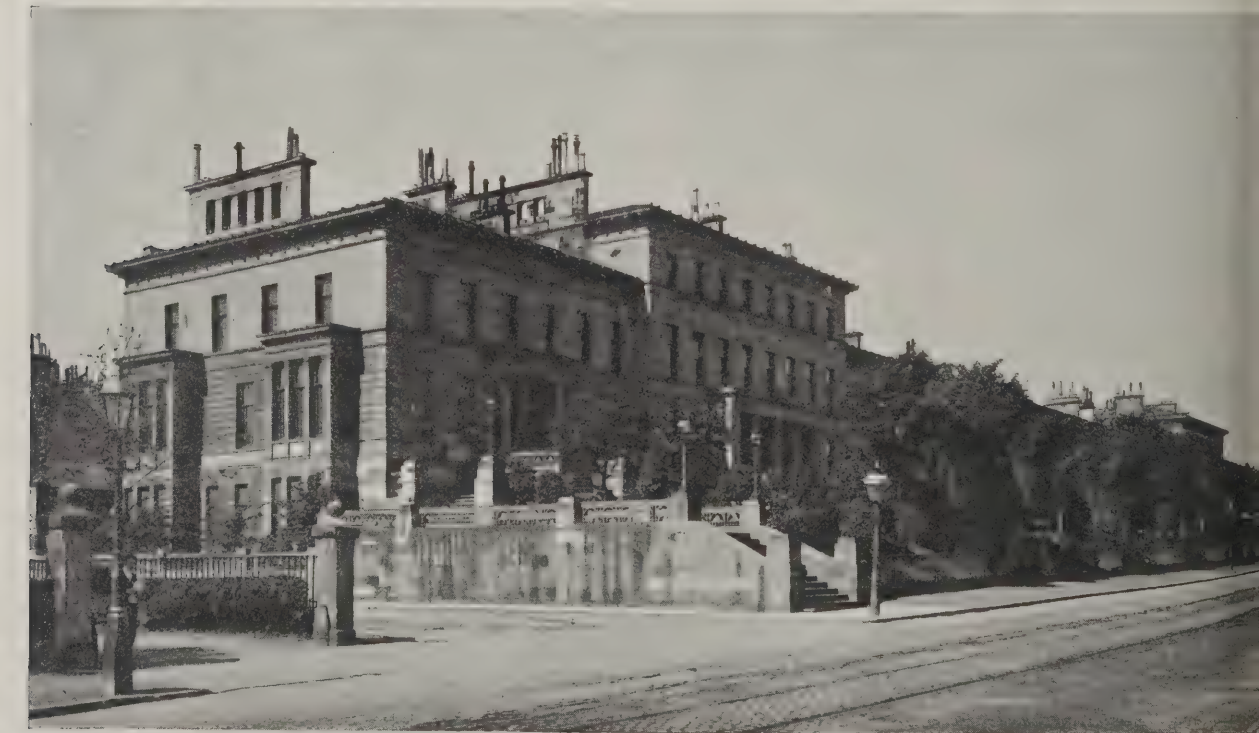
SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

WHEN the shape of a building and the disposition of its parts are alike inexplicable, and when its architect is a man of repute whose work cannot lightly be brushed aside as if it were merely nonsensical and of no account, the work in question is sometimes described as belonging to the region of abstract form. This latter is a very vague term, and it may be made to include everything, but, like almost all such convenient phrases, it really means nothing at all. But it is a saving help in time of trouble to people who are confronted with a building which they do not understand, which in their heart of hearts they profoundly dislike, but which, on account of the prestige of its architect, they are afraid to condemn. On such occasions a critic can either be silent, or else he can take courage, remembering that the greatest art is simple and makes an immediate appeal. The second course is made easier for him if he also bears in mind the fact that even Homer nodded.

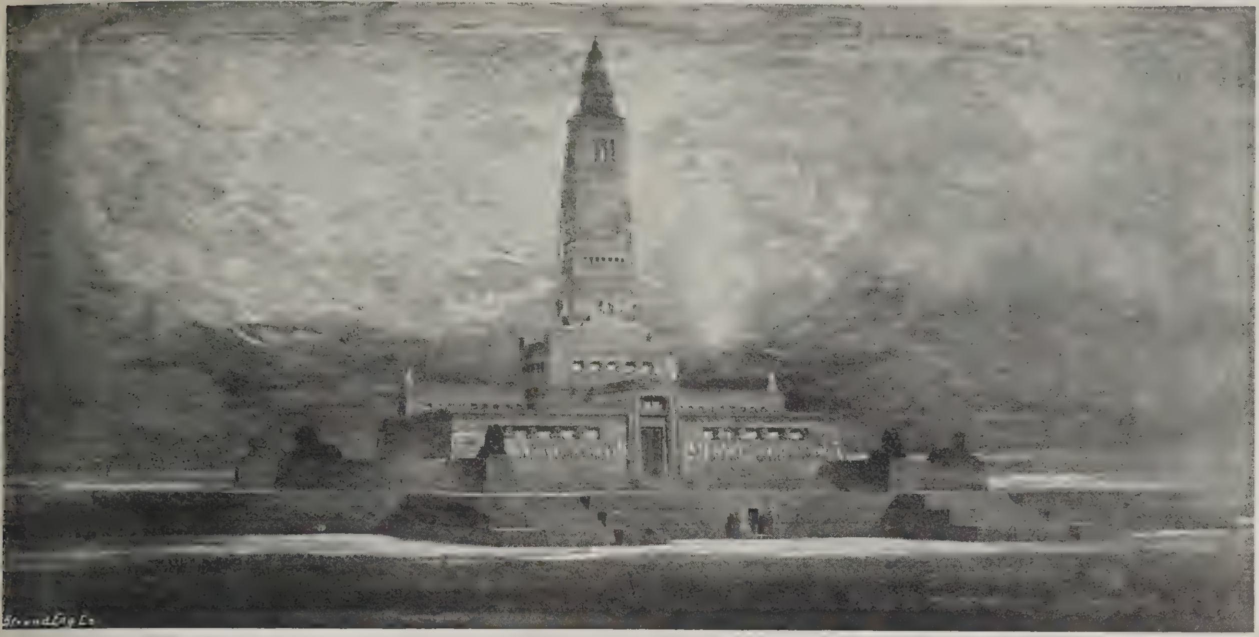
Let us glance at Alexander Thomson's Queenspark Church, Glasgow. Here we have a composition which absolutely defies analysis. The stumpy columns look as if they had once been of ordinary length, but have been truncated for some unknown reason. Stumpy columns can look very well upon occasion, but it is difficult to justify their use in conjunction with a refined pediment such as usually surmounts an order of the conventional kind. One may ask why the main body of the church is not in some manner accentuated on the façade of the lower storey. At present it not only ignores the superstructure, but its entablature ruthlessly cuts into the entrance doorway, which consequently appears as if it were a bead threaded on a string and could have been moved to the right or left with perfect ease. Its position has no element of fixture, except that it is exactly under the pediment. But this is not enough. Anybody can put one thing exactly beneath another; the features must be joined in a more subtle manner if they are to form a harmony which is worthy of the name of composition. To revert to the doorway, its height is apparently left to c
Its coved cornice is not connected with the wa
face, and the columns which support it have no r
whatsoever with the entablature that glides th
them. One imagines that the whole pylon, w
columns, might have been a little lower or a
higher, and the features in its neighbourhood
have had no reason to complain, for they would
been quite unaffected. In fact, it has no *organ*
nection with the structure of which it is a
What determines the height of the blank walls
forms the background for tne entrance? No
That, too, might have been raised at random, f
quite an arbitrary element—a mere floating fe
Another floating feature is the little pylon
second storey. As for the dome, spire, or cup
whatever it may be called, it reminds one of the d
of Professor Ollbrich of Darmstadt; and in
respects, especially in its manner of compositio
church resembles very closely the architectural
tures of that eminent exponent of L'Art Nouvea
fact, it may be described as L'Art Nouveau
Greek or Egyptian dressing.

A Classicist is placed at an enormous argumen
disadvantage, if he deems it incumbent upon h
to defend the Queenspark Church at Glasgow
indeed, it is possible to contend that the existe
this building, whose accidental conglomeration
tures declares it to be essentially Romanti
Romantic in the worst sense of the word, has
untold mischief to the cause of those who are try
introduce into English architecture the qualit
repose and harmony which have their highest e
sion in the masterpieces of Greek art. The mediæ
who tell us that architecture derived from th
Egypt or Greece is "quite unsuitable to our no
temperament" point a finger of scorn at the Q
park Church, Glasgow, and imagine that their
proved.

At the close of the former article upon the w



GREAT WESTERN TERRACE, GLASGOW. ALEXANDER ("GREEK") THOMSON, ARCHITECT.



DESIGN FOR THE ALBERT MEMORIAL, LONDON. BY ALEXANDER ("GREEK") THOMSON.

‹ander Thomson, which appeared in the last issue
is journal, the opinion was expressed that the real
e of whatever blemishes these churches may
ess is their author's acceptance of the *symbolic*
ry of design. This opinion is not founded upon
conjecture, but may be substantiated by quoting
vords of Thomson himself. When discussing the
ect of architectural forms he says: "There are the
mid, the obelisk, and the rudimentary temple
s, each having its sides sloped in a greater or less
ee, and by this peculiarity suggesting a common
ionship. I have spoken of the pyramid as expres-
the simple idea of stability or duration. Suppose
idea to be distinctly impressed upon the mind;
look at the obelisk. The same idea is reproduced
strongly, but there is another element added, that
oportion, expressing the idea of justice and truth.
these ideas readily combine. Then we have the
nentary temple form somewhat more complicated,
nevertheless, presenting to the mind a clean-cut
ite shape, which the memory not only retains with-
ffort, but which it cannot get quit of. The ideas
essed in the two other forms are still present here,
n the case of the portico there appears a third
ent, the columnar. These columns contrast with
severity of the general outline by their softly
ded and elegantly moulded forms, elaborated
tenderness in the finer features of their capitals,
vhole resting upon a background of deep quiet
ow, and exhibiting that pleasing kind of beauty
seems to smile upon us and which corresponds
and expresses the idea of kindness or goodness.
we have three ideas corresponding with
angeableness, justice, and goodness all combined,
having their effect upon the mind heightened by
nfluence of various accessories." This is sheer
inism, with the very slight difference that instead
ing told that a Gothic form such as the pointed
represents "aspiration," or that a piece of carved
tic foliage is expressive of "truthfulness," and so
e are given to understand that certain Classic
are expressive of similar moral qualities. But
on as architecture is reduced in this manner to a
es of caligraphy the need for composition entirely
pears. All the designer has to do is to introduce
his structure pyramidal, the obelisk, and the
o forms, and lo, it represents unchangeableness,
e, and goodness! What more can be desired?
o far from such a building being an example of
ract form," it is really characterised by an entire
absence of form, except in so far as certain parts of it, when considered separately, have form; these, however, possess the quality of form because they are stolen from ancient buildings whose authors had no notion of these supposed symbolic attributes of architecture, but as artists were occupied with the difficult task of giving their structures the æsthetic cohesion and organic relation of parts that alone can be described as form. Let us try to put ourselves in Thomson's place, and enter into his thoughts just as he was about to design a church. He begins (after he has satisfied the utilitarian needs of his clients and has got out a plan which provides sufficient accommodation and convenient entrances and exits) to consider how he can endow his building with the qualities of unchangeableness, justice, and goodness. The quality of unchangeableness never presents very much difficulty. All he has to do is to give slopes to the sides of his doors; in fact, any wall surface which has a tapering slope expresses unchangeableness. Entrance pylons are extremely useful for this purpose. It is possible to detect an element of restraint in Thomson's work, which requires some explanation. It may be noticed that he never gives the sides of his windows slope. This is because he does not consider the window to be an architectural feature at all; he only recognises the pier; but we will deal with this later when we quote some of his opinions upon the subject of fenestration. Having, by means of a judicious employment of pylons and slopes, succeeded in endowing his structure with unchangeableness, he must now turn his attention to justice. The obelisk represents justice, and in order that this virtue may be prominently expressed, the form must be broadened out and elaborated into a tower, which can be further decorated and embellished in various ways. A small pylon can be attached to it, as in the church of St. Vincent Street. This is really in the position of a window, but it has to take the form of a doorway, it being necessary for its sides to be sloping. To Thomson doorways like windows are not themselves architectural elements. The entrance pylon is the real unit; and he is obliged to introduce this feature even on occasions when the opening is not a doorway at all. But to return to the subject of obelisks, the Caledonia Road church provides an example of a tower that is quite normal, until just at the top, where it has a sudden decrease in size and its flanks begin to slope. Thus the tower, by approaching the obelisk form at its summit, is made expressive of "justice." In the case of

the Queenspark Church and the design for the Albert Memorials the towers also diminish towards their summits. Having secured the qualities of unchangeableness and justice, it remains to introduce that of goodness. This can be done by designing a complete portico, as in the St. Vincent Street and Caledonia Road Churches. But Thomson is no impossibilist. He can compromise, for he is aware that half a loaf is better than no bread. If, in any particular instance, the circumstances make it difficult for him to introduce a whole portico, he is satisfied with a fraction of one, as in the Queenspark Church, where the portico is abruptly cut off just when it was beginning to be interesting. The Greeks discovered that it was only possible to establish proper relations between podium, column, and entablature by designing tall columns which made up for their lack of breadth by their height, and so were capable of taking a dignified place in the trinity. But it is obvious that Thomson would regard all this as a superstition. To him columns represent "goodness," and if he could not get a tall, elegant one he was quite satisfied with an example that was stumpy. In the case of the Queenspark Church he had made such a large part of the building symbolic of unchangeableness and justice that goodness was rather neglected. The two columns at the entrance were woefully insufficient to redress the balance, so he had to introduce the four short fat columns in order to give the requisite note of goodness. That comes of leaving things too late! However, although it was a tight squeeze he got the columns in!

For a great part of his life Thomson's theory of symbolism prevented him from designing buildings which were really architectural in character, and he was still further hampered by his doctrines concerning the arch, the dome, and the window. He tells us that "While the Egyptians and the Greeks bestowed their chief attention upon the solid parts of their buildings the Romans and Goths adopted the openings as the principal objects of their concern. Now it will be observed that whereas the column is susceptible of being adjusted to the nicest proportion and the highest degree of the refinement of form, the arched opening or void is extremely limited in these respects. And neither in proportion nor outline has it ever assumed even the more distant approach to the degree of excellence to which the column attained under the Greeks. A building like the Colosseum fills him with rage, as do all the triumphal arches, and he complains bitterly that the Orders have been reduced to a position of servitude, and have, as it were, become the menials of their more aggressive neighbours, the arches. Most people, however, would state the matter in exactly opposite terms, and say that the Orders were such a mighty instrument of design that they were called in to enforce discipline upon the unruly, restless arches which otherwise would not have been capable of absorption into single artistic wholes, but would have attracted too much individual attention to themselves. It is to the credit of the Romans that they had the wisdom to use the Orders for this purpose, and the prestige of the Greeks was immeasurably enhanced when it was found that the architectural forms they had devised were capable of such universal application. Thomson included all arches both pointed and semi-circular in the same condemnation; not only on æsthetic grounds, but constructional. He says: "The Greeks avoided the arch, knowing well the destructive nature of this most mischievous and absurd of building contrivances. Its adoption by the Romans has strewn Europe in ruins, whereas lintelled buildings in Egypt and Greece have stood for thousands of years without showing any other symptoms of decay than such as have resulted from the ordinary processes of disintegration. The best engineers are adopting the girder instead of the arch for wide openings. In short, Stonehenge is more scientifically constructed than York Minster."

This explains why Thomson employed such pecu forms in his shapeless tapering domes. He felt c strained to build them up by means of courses of br work laid horizontally. It is strange that while imagined himself to be following the true Classic dition, he was merely repeating the worst errors of Mediævalist contemporaries.

For he allowed what he imagined to be a neces of construction to determine an architectural fc Instead of mastering his material he became its vant.

It was Thomson's object to revive the Greek st but it can hardly be said that he popularised it. Th were signs that towards the end of his life his man of building changed, and his Great Western Terr Glasgow, is a quiet and dignified group. It is unfo nate that he is best known by some of his ot designs, which are apt to give people the impress that his work was not only very narrow in scope, extremely licentious in character.

THE PLATES.

SPECIAL attention is drawn this week to double-page plate, entitled *The Usher H Edinburgh: Detail of Steel Construction Dome. Stockdale Harrison and Sons and How H. Thomson, Architects.* The Usher Hall is proba well known to our readers as one of the most succ ful buildings of the monumental type that h recently been erected in the kingdom, but to re its general appearance we publish on page 35 photograph of the principal elevation. An art dealing with the steel construction of the dome is published in this issue, our intention having beer give, by text and illustrations, a comprehensive acco of the work carried out in this feature of the buildir

Taking the single plates in the order in which t appear, we give three noteworthy examples of curr architecture. These are:

(1) *Lincoln Free Library. Reginald Blomfi R.A., P.R.I.B.A., Architect.* This building is one Mr. Carnegie's numerous benefactions. The mate is Ancaster stone. The contractors were Mes Wright, of Lincoln; Messrs. Keith and Blackr were responsible for the heating and ventilation; Messrs. Libraco; Lucy, of Oxford; and Curtis Mawer, of Lincoln, supplied the fittings. We rep duce a ground-floor plan on page 363 of this issue.

No. 7, St. James's Street, London, and Detai Porch and Entrance of Same. Edwin L. Luty A.R.A., F.R.I.B.A., Architect. A good example one of Mr. Lutyens's several "manners." It is car out in red brick with stone strings and porch.

The White Lion Hotel, Cobham, Surrey. plate is the ninth of our Late Georgian series. long, low lines of the red brick building, with the br tiled roof and the nestling dormers, together with large grouped chimney stacks, give an air of gener hospitality to the house; while the treatment of pedimented central portion, with the slender colu to the porch, adds the necessary touch of distinctio the front. The clever way in which the blank win spaces are introduced on the first floor at either sid the central bay, buttressing it up, as it were, making the whole design appear more solid, is w noting.

We continue the publication of our *Chart of T Planning Procedure for Local Autnorities' Sche* with Stage VI., and for a Student's Drawing we two fine details, by M. A. Recouver, of an *I Capital, Forum of Trajan,* executed for the Gr Prix de Rome. For the reproduction of the latter, are indebted to the courtesy of the "Massachus Technological Record."

HERE AND THERE.

HEN the last of the six million visitors to the
Great Exhibition had gone, and Hyde Park
was left with its great glass case, a very
ward situation arose. What was to be done
this Crystal Palace? The Government declined
ke it over, yet it seemed a huge pity that it
ld all be dismantled and sold as scrap material.
is juncture public opinion began to stir itself,
having found voice in a vigorous group of men,
rystal Palace Company was floated with a
al of £500,000, and the re-erection of the build-
n the heights of Sydenham was assured. Fer-
on has given us a very piquant synopsis of the
tion and development of the whole scheme.
ays: "Paxton, a distinguished horticulturist,
sketched the idea on a sheet of blotting-paper
a great greenhouse of his own; Barry conde-
led to add the vaulted nave: the contractors,
and Henderson, supplied for themselves the
ssary engineering skill; Digby Wyatt, not long
ned from a lengthened student career at Rome,
made superintendent of the works; Cole was
ndefatigable administrator in the capacity of
Beresford Hope used to call the 'showman';
Society of Arts, advancing every year in a
ant if temporary popularity which was of the
test service in the circumstances, expended its
ented resources in keeping up the public
est to the necessary tension; and Prince
rt's earnest goodwill, and his popular authority,
tituted a never-failing reserve of potential in-
ce which was the fly-wheel of the whole enter-
."

* * * *

me serious problems had to be faced in this
of re-erection, but they were successfully
d by the contractors under the superintendence
illiam Cubitt (then president of the Institution
vil Engineers), with the assistance of Charles
d Wild. A temporary building on a flat site
to be translated into a permanent building on
ping site, and that quickly. The dismantling
ommenced in August, 1852, and the new struc-
was finished by June, 1854. It was a gigantic
upon which nearly 7,000 men were engaged.
tated last week, the building was re-erected
antially as it stood in Hyde Park, but there
two or three important alterations and addi-
. The nave was given an arched roof in place
flat one, thus adding 44 ft. to the height; three
epts were provided instead of one, and recesses
ft. were made in the fronts of these in order
ve shadow; and the water towers were erected,
and south, to provide the necessary pressure
he series of fountains, the finest of which was
red to send up a jet 90 ft. into the air. The
rs were designed by Brunel and are very inte-
g examples of engineering skill. They rise
height of nearly 300 ft. (actually the north
is 284 ft. and the south tower 293 ft. 8 in.)
re of 46 ft. external diameter, each stage being
up of twenty-four cast-iron columns in pairs
ected by solid girders, and the whole tied to-
r by braces, diaphragms, and a system of
ing. A 9 ft. brick chimney rises through the
e of each, connecting with a brick shaft 24 ft.
, out of which the flues to the boilers and fur-
are led; this shaft, called "The Paxton
el," extends under the whole length of the
ing. The main function of the towers was to
tanks, each of 250,000 gallons capacity, but
orth tower has been made a point of vantage
anding a wonderful view of the surrounding
country—a Waygood lift saving one the task of climbing up; while the south tower is a veritable hive of industry, for here is installed the Crystal Palace School of Practical Engineering; it was started forty-two years ago by the present principal (Mr. J. W. Wilson, M.Inst.C.E., M.Inst.M.E.) and his father, and scores of engineers now occupying high positions at home and abroad have gone through its shops.

A few additional items, and we have done with the figures of the Crystal Palace. It is a place that bristles with big figures—the total length, 536 yards; height of central transept from floor, 170 ft.; total weight of iron, 9,641 tons; glass, 25 acres; organ, 4,568 speaking pipes; orchestra, 216 ft. by 100 ft. at the centre.

* * * *

Turning now to what I may call the art, as contrasted with the constructional, side of the building, we are confronted with a strange collection of material. The chief permanent features are of course the Architectural Courts. Immense pains were taken in carrying these out, and it is all the more to be regretted therefore that they should have been allowed to reach their present condition—derelict and marred by most incongruous objects. Fergusson was responsible for the Assyrian Court: the Egyptian, Greek, and Roman Courts were carried out under the direction of Owen Jones, who acknowledged his indebtedness to Joseph Bonomi and F. C. Penrose; and the Byzantine, Mediæval, Renaissance, and Pompeian Courts were arranged by Digby Wyatt, with Charles Fowler as principal superintendent and Robert Dudley as superintendent of the restorations and monuments. Ruskin used to bemoan that the only places where Gothic sculpture could be seen in London were the South Kensington Museum and the Crystal Palace, being mixed up at the former with steam-threshing machines and dynamite-proof ships of war, and at the latter with Rimmell's perfumery. I am afraid that if he were to visit the Crystal Palace to-day he might find occasion for even more caustic criticism. A most malevolent sprite would seem to have been at work transposing the statues and other objects, which had once been placed in position with such appropriate care. Old and new are put cheek by jowl regardless of the proprieties. The Earl of Derby, frock-coated, stands on his pedestal in front of the Egyptian Court as though addressing the occupants of Cadbury's Chocolate Stall opposite, and quite unconscious of Amenemhat II. at his side. The Belvedere Torso of Hercules is not seen to best advantage against a white-enamelled fretwork screen, while Thorwaldsen and Westmacott are most unexpected in the Florentine lobby, where their works are only eclipsed by the red baize door of the concert hall and its block lettering—"Opera Glasses, 6d." The best-known caterer in England has put his tables in the Alhambra Court of Lions, but whether this is intended as a small joke calculated to aid digestion it is not possible to discern. Figures by the Mid-Victorian sculptors meet us aggressively at every turn. We could well spare them—Baily's "Three Graces," Canova's "Venus and Adonis," and the rest. But there are some splendid casts sprinkled about which deserve a better setting than they get here, such as the Coleoni monument, the Gattemelata, and Harry Bates's fine monument to Lord Roberts. Space does not allow me to deal with them at any length this week, so I must hold over further comment, as well as my general estimate of the Crystal Palace.

Ubique.

ECCLESIASTICAL ARCHITECTURE AT THE ROYAL ACADEMY.

What an epithet is "ecclesiastical!" There is about it a smell of varnished pitch-pine and hot-house lilies, a something a little artificial and uncomfortable. By the mere pronouncing of it (according as he makes the fourth syllable rhyme with "glass" or not) you shall size a man up and know his views on ritual and the question of apostolic succession.

And the influence of the epithet lies on the architect too. In houses or shops or railway stations he has new problems of planning and materials, new demands of the human race to satisfy. But not in the church, except that it has to be heated, and even then he pretends that it hasn't, and makes his chimney an inconspicuous pinnacle, as the authors of the church shown in a pleasant pen-drawing (No. 1,944).

It must be even more difficult to design a good church than a good house. In the one you have the desires, tastes, prejudices of one family to meet and weld into quiet and distinguished building; in the other there are a committee and all the small jealousies of a parish to consider, as well as the "ecclesiastical meaning" of the various forms of design—how, perhaps, austerity outside will be taken to imply scarlet and candles within, or a certain lavishness of academic correctness held to harmonise with the travelled scholarship of the "Broad" churchman.

The newer needs of a boys' club call out fresher and broader treatment, as is shown in Mr. Goodhart-Rendel's Eton Mission at Hackney (1,985), which seems ready at once to welcome the least responsible and to defy the most destructive. All honour, then, to those whose strength and sureness of design in church work show little trace of the conflict that has lain behind, such as Mr. Capper at Grimsby (1,968), where the buttressing piers inside allow a plain mass of external wall, and there is no fuss of "ecclesiastical" ornament. Here you might see swinging from the nave roof models of Yarmouth smacks, as the pious fishers hang models in their churches along the Biscay Coast; or, again, Mr. Temple Moore's slim work (1,951 and 1,963), though it is perhaps more "of a period"; or Mr. Burke Downing's Church Hall (1,955), with its domestic eaves in the background.

Of course, it is possible to get a broadness of effect by a judicious use of watercolour washes, of which Mr. Horsnell is a master. Perhaps Nos. 1,935 and 194 owe a little of their charm to this. The blue and orange and lemon and grey are particularly pleasing in the latter, the outside of the new church at Redcar; inside there is an interesting treatment of boarded barrel ceiling, in colour, and large tie-beams carried across. No. 1,948 has a broad simplicity of intersecting vaults, but the outside is stodgy, in spite of Mr. Gascoyne's sunny October day.

Professor Beresford Pite shows a fine pen drawing of the new cathedral church in Uganda, quite the most alluring of the churches shown—simple, massive, sparkling. I hope it really will be whitewashed.

Another fine pen-drawing is No. 1,946, the Lady Lever Memorial. Whether the whole building is the memorial, or only the porch, is not apparent. The empty niches, as shown here, and often elsewhere, are surely an affectation in our day. It is like wearing your arm in a sling because an ancestor was wounded at Naseby.

Of the other work shown in pen drawings, Mr. Caröe's church (1,929) has a massive tower, marred by elaborateness at the top, and No. 1,973 is a grim tower and strong, but its windows are irritating. Perhaps, however, one of them was put in at the request (and expense) of Mrs. Blank. Seldom do good works and good taste go together.

Multiplicity and restlessness make a good deal of the other work. It creeps into No. 1,950 (Mr. Brierly's competitive design for a church at Harrogate), which has much to attract, but would not the ornament on the forehead of the memorial chapel be better away? The chancel of No. 1,949 vitiates the simplicity of the roof treatment.

Interior work, indeed, suffers from it to excess. There is a reredos which is almost a Christmas bazaar, and in another place an archway tricked out with celery. An exception is Mr. Welch's simple and sturdy lectern for St. Jude-on-the-Hill, a straightforward pen perspective.

For the rest the visitor will note a grimly simple brick church (Mr. E. S. Hall, No. 1,954), which he will like to see when it is built. He will hope that Mr. Maurice Webb's proposal will be accepted, so that his tall tower (1,940), with the bicycle in the top, may call the busses to Dollis Hill. But on the whole he will bring away an impression of restlessness.

At which all those whose works are hung will exclaim "Go thou and do better." For when all is said, under the captic ness of this criticism lies a very f realisation that to do is one thing, to how it should not have been done q another.

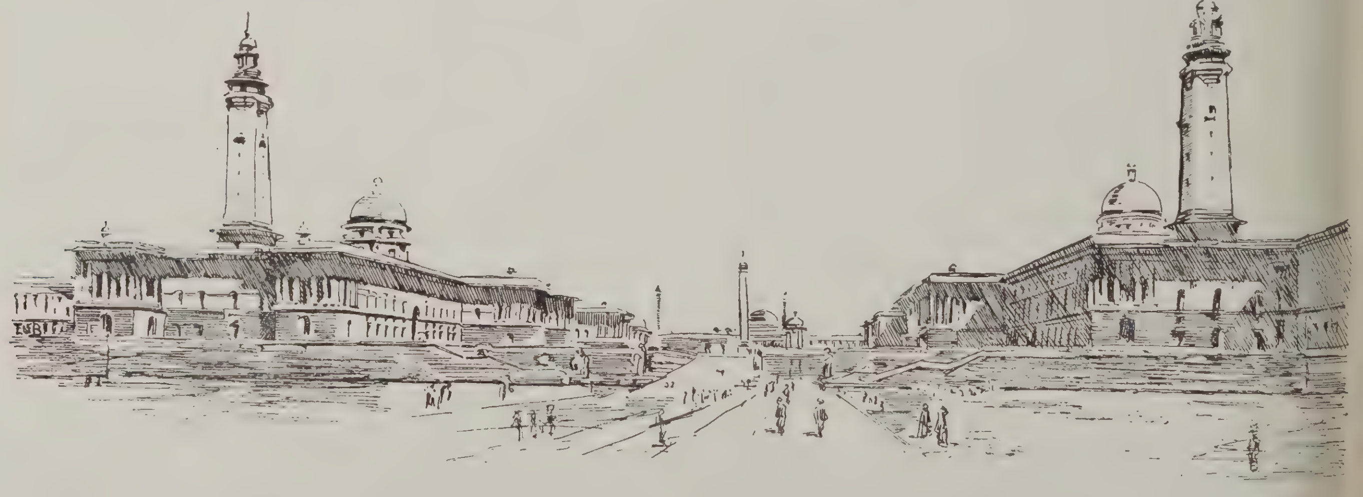
W. G. N

THE NEW DELHI: DESIGNS F GOVERNMENT BUILDINGS.

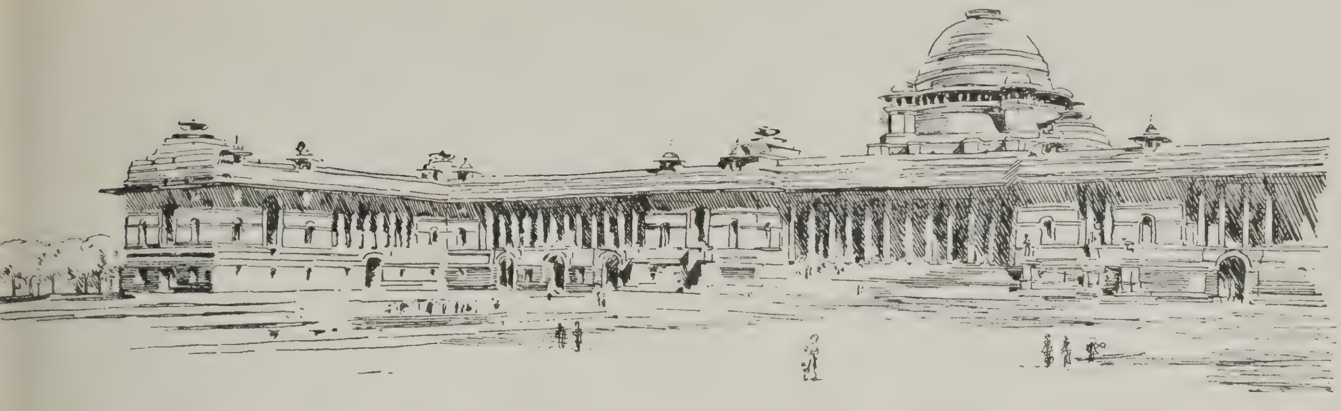
The drawings of the Indian Secretari and Government House at the New De forming the great block of capital buildi designed by Mr. Edwin L. Lutyens Mr. Herbert Baker, are now on view the Royal Academy. The accompany sketches of the original drawings give so idea of the general lines upon which Indian Capitol has been conceived. use the language of the architects the selves, it has been their aim "to expre within the limit of the medium and of powers of its users, the ideal and the f of British rule in India, of which the N Delhi must ever be the monument."

The Secretariat buildings, which will c tain all the chief offices of the Governm of India, stand on either side of a gr processional avenue leading up to Gove ment House itself, which, as the reside of the representative of the King-Emper with its central Durbar Hall and the adjo ing chamber for the Legislative Council the Viceroy, will be the culminating po of the new city. The approach to the Sec tariat buildings from a spacious pla —the "Great Court"—lies up an incli way with a rise of about one in $22\frac{1}{2}$, so th they will stand at their base some 30 above the surrounding country. The t blocks of which they are composed measure about 460 ft. in breadth and 1, in length, whilst "Government Cour between them, will be about 400 ft. bro The eastern ends facing the plain marked by two lofty towers and d loggias looking on to the central vis Each block is crowned by a central do rising, in the northern block, above spacious entrance hall, and in the south block, above a conference hall, surrounc by a suite of official reception rooms. yond the Secretariat buildings "Gove ment Court" passes into "Vicero Court," which is, in effect, a raised cau way about 600 ft. in breadth and 1,300 in length, leading up to Governm House, the portico of which will be rais some 20 ft. or about 50 ft. in all, above level of "King's Court."

Government House itself centres in great Durbar Hall, with a noble do



THE NEW DELHI: SECRETARIAT BUILDINGS AND "GOVERNMENT COURT." E. L. LUTYENS, A.R.A., F.R.I.B.A., ARCHITECT.



THE NEW DELHI: FRONT VIEW OF GOVERNMENT HOUSE. E. L. LUTYENS, A.R.A., F.R.I.B.A., ARCHITECT.

ling the dome of the Pantheon in
e, which dominates and governs the
ıt of all the surrounding buildings.
d this Durbar Hall are grouped the
rooms and great stairways from the
nce courts on the north and south side,
the private suites in the southern wing
he Legislative Council Chamber and
s for its members in the northern
to which a lateral avenue will afford
arate approach. In the rear of
rnment House there will be a raised
n, walled and terraced in the manner
ghul gardens, while below it, on the
of the surrounding country, a park
be laid out, containing, in the im-
te vicinity of Government House,
houses and quarters with avenues
g, through open glades and wood-
up to the rough shrub and hill trees
ridge above it and the military can-
nts beyond.

GISTRATION BY CHARTER.

e R.I.B.A. Council's Proposals.

pursuance of the resolution passed at
pecial general meeting of January 5,
[see Journal, January 17, 1914], the
cil have considered in detail the pro-
for obtaining a new Charter and
ws to enable the Royal Institute to
tute and maintain a register of
ed architects, and at a special general
ng held on Monday, April 27, with the
ent, Mr. Reginald Blomfield, R.A.,
chair, the following scheme was sub-
for the consideration of the General
—

The Charter to enable the R.I.B.A.
nstitute and maintain a Register of
s who have shown:

In the first instance by the possession
tain qualifications (see Clause 3),

In the future, and after the first
shment of the Register, by their
g passed certain prescribed tests (see
5).

ney are qualified for the practice of
ecture.

ows of the R.I.B.A. elected by the
il under Clause 2 of the Supplemen-
arter of 1909 to be admitted to the
er without having passed the "pre-
l tests."

ll persons so inscribed on the Regis-
have the right to call themselves
stered Architects," but only Corpor-
embers of the R.I.B.A. to have the
to call themselves "Chartered
ects."

n the first instance there shall be
ed on the Register:—

The Fellows, Associates, and Licen-
of the R.I.B.A.

All such members of the Allied
es in the United Kingdom as are
engaged in the practice of Architecture and are recommended by those Societies and approved by the Council of the R.I.B.A.

(*c*) Any person who shall prove to the satisfaction of the Council of the R.I.B.A. that at the date of the granting of the Charter he had been for at least two years engaged as a principal in the *bona-fide* practice of Architecture, or had served for ten years as pupil, apprentice, or assistant, or partly as one and partly as the other, to a person or persons who at the date of the granting of the Charter is or are entitled to be enrolled on the Register; and who shall be approved by the Council of the R.I.B.A.

No applications for admissions to the Register under 3 (*b*) and 3 (*c*) to be entertained after three months from the date of granting of the Charter.

4. Every Architect on the Register must sign a form of declaration prescribed by the Council.

5. The "prescribed tests" shall be the Examinations qualifying for admission to membership of the R.I.B.A., and the fees payable for entering for such Examinations shall be identical with the fees payable by candidates for the R.I.B.A. Examinations. Candidates who have passed the Examinations shall be eligible for membership of the R.I.B.A.

6. An annual registration fee shall be payable to the R.I.B.A. by all Architects on the Register.

7. The Register to be administered by a Standing Committee of the R.I.B.A., whose functions shall be limited to supervision of the Register, to investigation of complaints in regard to the professional conduct of any person on the Register, and to reporting to the Council of the R.I.B.A. on matters connected with the Register only. The Committee's powers to be limited to reporting to the Council, by whom the required action will be taken.

8. Representation on this Standing Committee and for the specific purposes only as defined in Clause 7 to be given to Licentiates. In all other regards the constitutional position of the Licentiates to remain as at present.

9. The number of members of this Standing Committee not to exceed 21, in the proportion of 10 Fellows, 7 Associates, and 4 Licentiates, until such date as the class of Licentiates shall have expired.

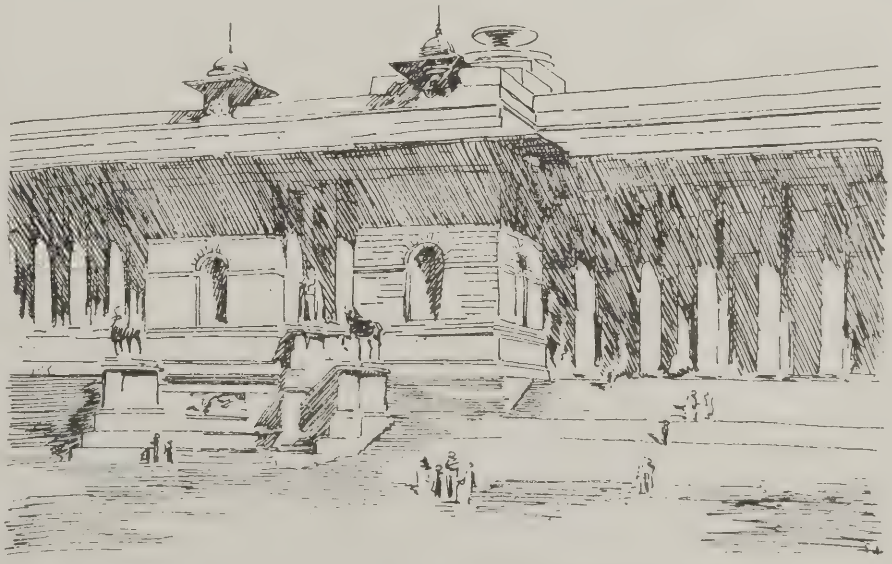
10. The Council to consist of:—

1 President (F.); 4 Vice-Presidents (F.); 1 Hon. Secretary (F.); 5 Chairmen of Standing Committees (F.); 1 Chairman of Board of Architectural Education (F.)—all ex officio; 15 Ordinary Members (F.); 10 Associate-Members; 2 Past Presidents (F.); 1 Representative of the Architectural Association (F. or A.).

The President or other representative, being a Fellow of the R.I.B.A., of every Allied Society in the United Kingdom having not less than 50 of its members on the Register (or such other number as the Council may from time to time determine). [Allied Societies having less than 50 members on the Register to be represented on the Council in rotation.]

11. The R.I.B.A. to be empowered to issue a scale of fees payable to Architects on the Register.

12. The R.I.B.A. to have enlarged powers of holding property.



THE NEW DELHI: DETAIL OF GOVERNMENT HOUSE.

13. The By-law in regard to the Board of Architectural Education to be revised so as to confer upon certain Schools of Architecture the privilege of representation on the Board.

Amendments on the Paper.

Mr. Sydney Perks, F.S.A. (F.): That Clause 10 be referred back to the Council for further consideration, a revised clause to be submitted to the General Body at an early date—it being distinctly understood that the members of allied societies are not to have larger representation on our Council than our own Associates.

Mr. Herbert A. Welch (A.): (1) That the following new clause be added to the proposals under consideration, viz.: That the disabilities imposed by previous charters and the by-laws upon Associate members be repealed, and that Associates be permitted to vote on all matters connected with the management of the Institute, including the charters and the by-laws.

(2) And, further, that the Council shall acquire such powers as are necessary to enable them to ascertain the opinion of individual members of the Institute on all questions in regard to alteration of the charters and by-laws.

Mr. S. Douglas Topley (A.): That Clauses 1 to 9 be referred back to the Council for further consideration and modification in accordance with the following suggestions: The register to be controlled by a Registration Board composed of twenty-one architects elected periodically by and from those whose names appear on the register, not less than eleven being corporate members of the R.I.B.A.

For a period of six months after the date of its first meeting the Board to have power to place upon the register the name of any applicant possessing the qualifications specified under Clause 3 (b) and (c).

An annual registration fee to be payable to the Board by all architects on the register.

CURRENT BOOKS.

A New Elementary Manual of Building Construction.

Elementary manuals of building construction commonly attempt too much, and the effort to make them comprehensive results in scrappy treatment that makes consecutive reading a weariness to the flesh. In fact, the average trade-class text-book is both an example of cramming and an incentive to it. Messrs. Sage and Fretwell have not fallen into this snare, their book being more than usually readable without any perceptible sacrifice of thoroughness. It is only to a very slight extent that their work suffers from the inevitable limitations of a book that must be cheap and portable, and yet must somehow be made to cover a field that is constantly expanding as the art and craft of the builder becomes rapidly more complex through the constant accretion of new materials and methods which supplement rather than supersede those that are older. Every craftsman should possess a fair all-round knowledge of the subject as a whole if he is to specialise successfully in his own particular calling, and an ideal text-book would be so planned as to make one subject special and the others subsidiary to it. That ideal, however, would imply a perfectly intolerable number of text-books, each written from the point of view of a particular craft; and for this reason, and since in each case the sale of the book would be restricted to members of the calling that received this preferential treatment, it is obvious that the ideal text-book is not a "business proposition." We must needs be content with such things as we have—with the books that present the subject, as it were, isometrically rather than in perspective. With this reservation it may be said without hesitation that the book under notice is excellent of its kind, except for one rather curious omission, to be mentioned presently. It deals very practically with the general principles of building construction, and it gives sufficient attention to detail to be valuable both for instruction and for reference. Although there is a very useful chapter on iron and steel, reinforced concrete is ignored, and we suggest that, in the future editions which the general excellence of the book should ensure, the disproportionately large amount of space at present given up to plumbing and sanitation should be curtailed to make room for a brief account of reinforced concrete. Perhaps this subject has been reserved for an "advanced" treatise which is pretty sure to follow this elementary manual; but we would nevertheless urge that no text-book on building construction, no matter how elementary in scope, should omit so important a feature. The omission is the more strange since reinforced concrete construction is certainly, and, strictly speaking, plumbing and sanitation are only very doubtfully, regarded as building construction, and the very admirable chapters on the latter subject might very fittingly be expanded into a separate treatise. The book is exceedingly well printed and the illustrations are copious and excellent.

"A Text-book of Elementary Building Construction" By Arthur R. Sage and William E. Fretwell, Lecturers at the London County Council School of Building, Brixton. With 576 illustrations. Pages viii. + 282, 5½ ins. by 7¾ ins., price 3s. 6d. net. London: Methuen & Co., Ltd., 36, Essex Street, Strand, W.C.

Architecture Virginibus Puerisque.

Of late several ladies have produced books about architecture, and their becomingly modest incursions into this domain are to be warmly welcomed. An intelligent public interest in the subject has been long and ardently desired by architects, who know that their own level of general achievement rises and falls in sympathy with the common or popular power of comprehension and appreciation. Mrs. (or Miss) Gladys Wynne has produced a most interesting little book entitled "Architecture Shown to the Children," and her demonstration is effectuated by means of forty-four plates, whereof the subjects are well chosen as being typical and representative of various styles and periods, although the collection as a whole is necessarily somewhat heterogeneous, and the same observations apply to the numerous and neat little sketches accompanying the text. In style and treatment the book is quite admirably adapted to the purpose it is intended to serve. Legend and anecdote are freely introduced, but always emphasise or elucidate some interesting point, and every architectural term that is used is carefully and sometimes quite cleverly explained. In short, the author has an enviable knack of exposition, and this capital introduction and incentive to the study of architecture is capable of excellent service as a reading-book for schools, for both the subject-matter and the skill with which it is handled render the volume a valuable instrument for the development of general intelligence, and for the initiation or the furtherance of culture. It is surprising, when one comes to think of it, that the educational value of architecture has been hitherto so persistently ignored by teachers, but then its fine adaptability to this purpose has been seldom or never so vincingly demonstrated as it is in M Wynne's delightful little book.

"Architecture Shown to the Children." By Gl Wynne. Illustrated with numerous drawings photographs. Pages xvi. + 132, 6 ins. by 4½ ins., 2s. 6d. net. London and Edinburgh: T. C. & Jack.

Rural Building By-Laws.

Sir William Chance's little book co opportunely at a time when building o ations in rural districts, though unhap suspended to some extent by the pres hopes and fears, are bound to be resur very energetically in the near future. meet the demands of the new hous legislation. The book consists in the place of an introduction which is a print of a paper read by the author a meeting of the British Constitution A ciation in London at the end of last ye and this is followed by the text of a rev Code of Building By-Laws for Rural tricts drafted by a well-known architec an alternative to the existing Rural C of the Local Government Board, and Bill on the subject which was passed the House of Lords in 1906 without o sition. The introduction is very larg a sketch of the work of the Building By-l Reform Association, which came into e tence as a result of the inelastic M By-Laws Act of 1800. The Association tainly effected some very useful refor It helped to get the Revised Code drawn and it was responsible for the Bill of (pp. 53 to 58); in general, its efforts w directed to making the Building By-L more elastic in their operation, and w it was dissolved in 1912, the British C stitution Association assumed charge the Bill just referred to. The differen between the existing Model and the vised Code are shown very clearly by a ing to the text those classes of the M which are omitted from the Revised C or substantially altered by it.

"Building By-Laws in Rural Districts." By William Chance, Bt., M.A. London: P. S. Ki Son.

For Inventors and Patentees.

Many an idea that, given a fair op tunity, might be confidently expecte mature in a useful and profitable pater abandoned merely through ignorance procedure under the patent laws, wh rightly or wrongly, is commonly supp to be extremely complicated and extr gantly expensive. Mr. William H. Ta issues a year-book that should be useful in correcting erroneous impressi as well as in affording sound guida based on thirty years of specialisation to the steps that should be taken in o to secure protection at home and abr with the utmost economy of trouble money. Actual expenses are exempli and the whole subject is expounded clearly and comprehensively. Not onl procedure carefully explained, but, glancing through this bulky conveniently arranged volume gives ready assent to the claim it that "nothing of any possible terest or service to inventors been knowingly omitted." In particu there is a luminous discussion of w really constitutes the subject-matter fo valid patent and, to clinch the matter, opinions on this point of several emi judges are adduced. Various official fo are usefully included.

"The Inventors' and Patentees' Year Book for By William H. Taylor. Pages viii. + xxvii. + 6¾ ins. by 4¾ ins., price 7s. 6d. net. Manchester London: The Dexter Press, Ltd.

CONCRETE AND STEEL SECTION.

(MONTHLY.)

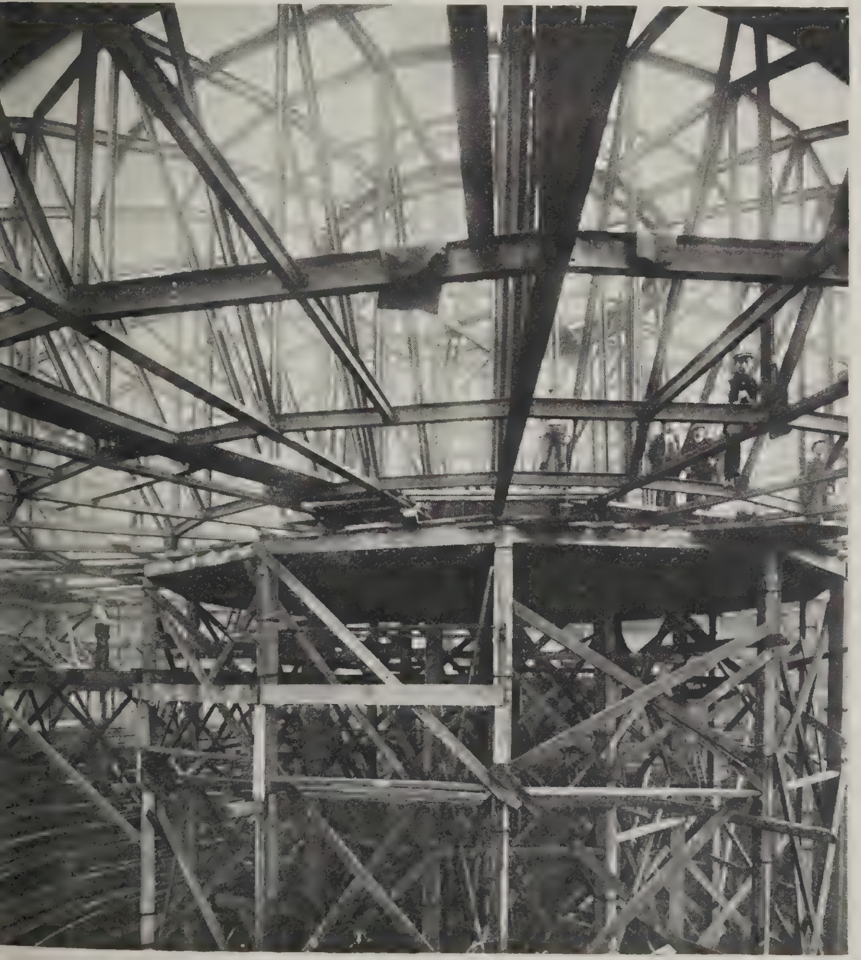
THE DOME AND ROOF OF THE USHER HALL, EDINBURGH.

BY J. R. SHARMAN.

he construction of a large dome is
ays an interesting problem, and the
of this fine building in Edinburgh pos-
es a number of novel and interesting
ures. The size alone is a matter of
iderable importance, as the building is
ft. diameter between the walls, and
height from ground to springing is
. The height from ground to the top
he dome corona is 91 ft., and the con-
ction depth of the steel trusses in the
re is 21 ft. 6 in.

s originally designed, the outside of the
e was to be formed of light coke-breeze
rete slabs $2\frac{1}{2}$ in. thick, reinforced with
nded metal. The way these slabs
carried on the purlins was very in-
ous. The purlins consist of a $\frac{3}{8}$ web
with two 3 by 3 by $2\frac{1}{2}$ in. Z bars
ed at the top to form a trough, the
rete slabs being formed with vertical
ges which fitted into these troughs.
lowest of the slabs at the haunch was
ed with a horizontal projection over-
ging the gutter, the space between slab
side of gutter being filled with a
men joint to allow for the expansion
contraction of the dome. Unfor-
tely it was found impossible to get
roof slabs made light enough in breeze concrete, therefore wood construction was adopted, the dome being boarded and covered with copper.

THE USHER HALL, EDINBURGH.
STOCKDALE HARRISON & SONS AND HOWARD H. THOMSON, ARCHITECTS.

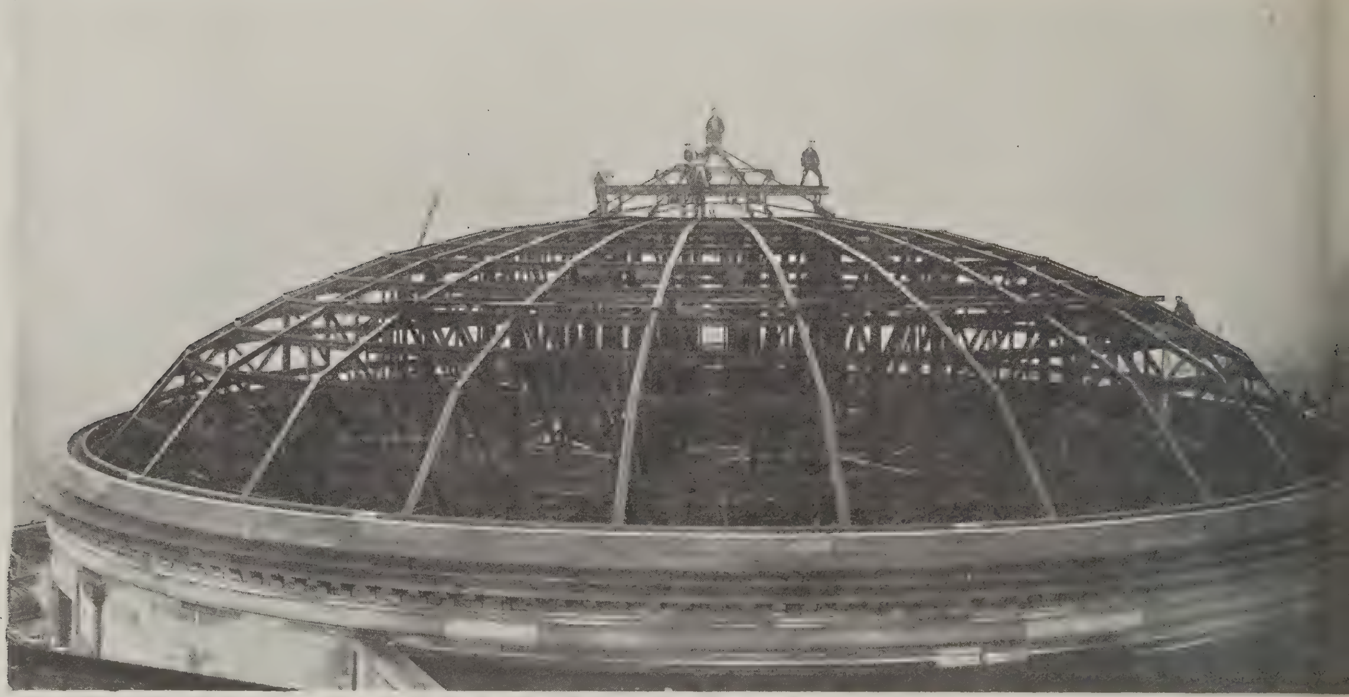


THE USHER HALL, EDINBURGH: ROOF IN COURSE OF CONSTRUCTION ON CENTRAL STAGING.

The lantern light in the centre is 24 ft. diameter, carried by eight half trusses connected at the centre. The lantern is covered with patent glazing in two lengths from centre to annular gutter.

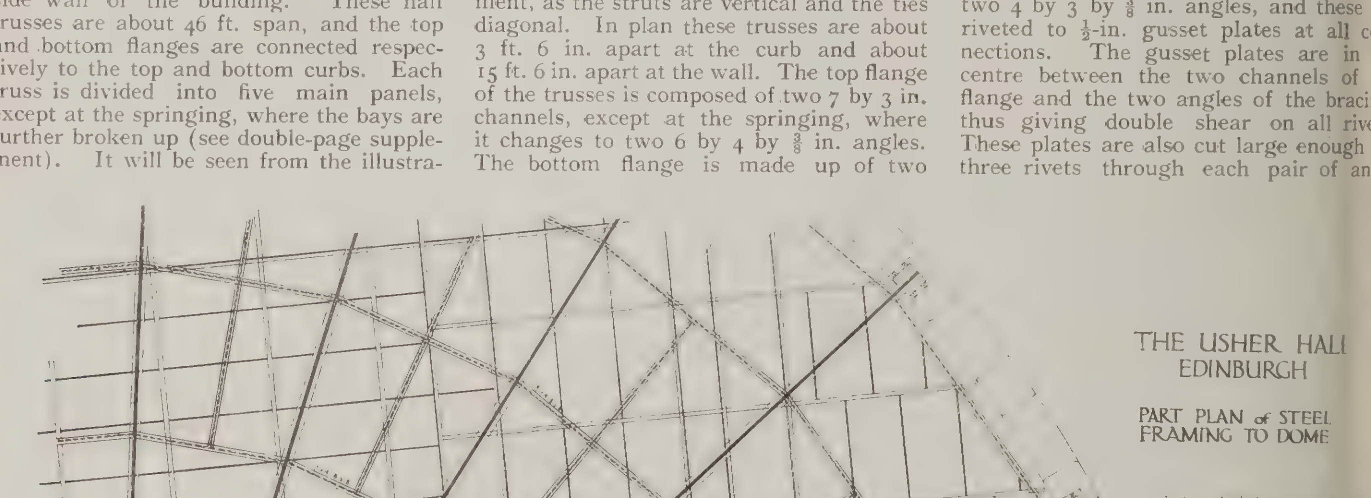
The outside surface of the dome is elliptical in cross section, being 80 ft. radius for the centre portion and 20 ft. radius at the haunch. The ceiling is carried on the lower member of the main steel trusses, and a complete system of purlins and bracing is also fitted at this level to carry the ceiling and the mouldings thereon. On this framing and above the ceiling a wood and plaster duct 6 ft. high is formed, being the fresh-air chamber, and for access to the different parts of the roof. There is a centre platform connected radially with the duct by means of a doorway and hinged bridge across the centre ceiling light.

The main steel construction of the dome is simple and well designed. It is very suitable for taking the complicated stresses which are set up in a roof of this type, and yet easy to manufacture, as the details and connections have been well thought out. There are two steel curbs, one at the roof level and the other at ceiling level, 21 ft. apart vertically. The top curb is 24 ft. 9 in. inside diameter, and consists of one 18 by $\frac{5}{8}$ in. web plate, two angles 7 by $3\frac{1}{2}$ by $\frac{3}{4}$ in. forming the top flange, and one angle of the same section forming the bottom flange. This top curb carries the ends of the eight half rafters forming the lantern light. The bottom curb is 26 ft. 9 in. diameter, made up of the same sections as the top curb, but in this case the two angles are on the bottom flange and the single 7 by $3\frac{1}{2}$ by $\frac{3}{4}$ in. angle on the top.

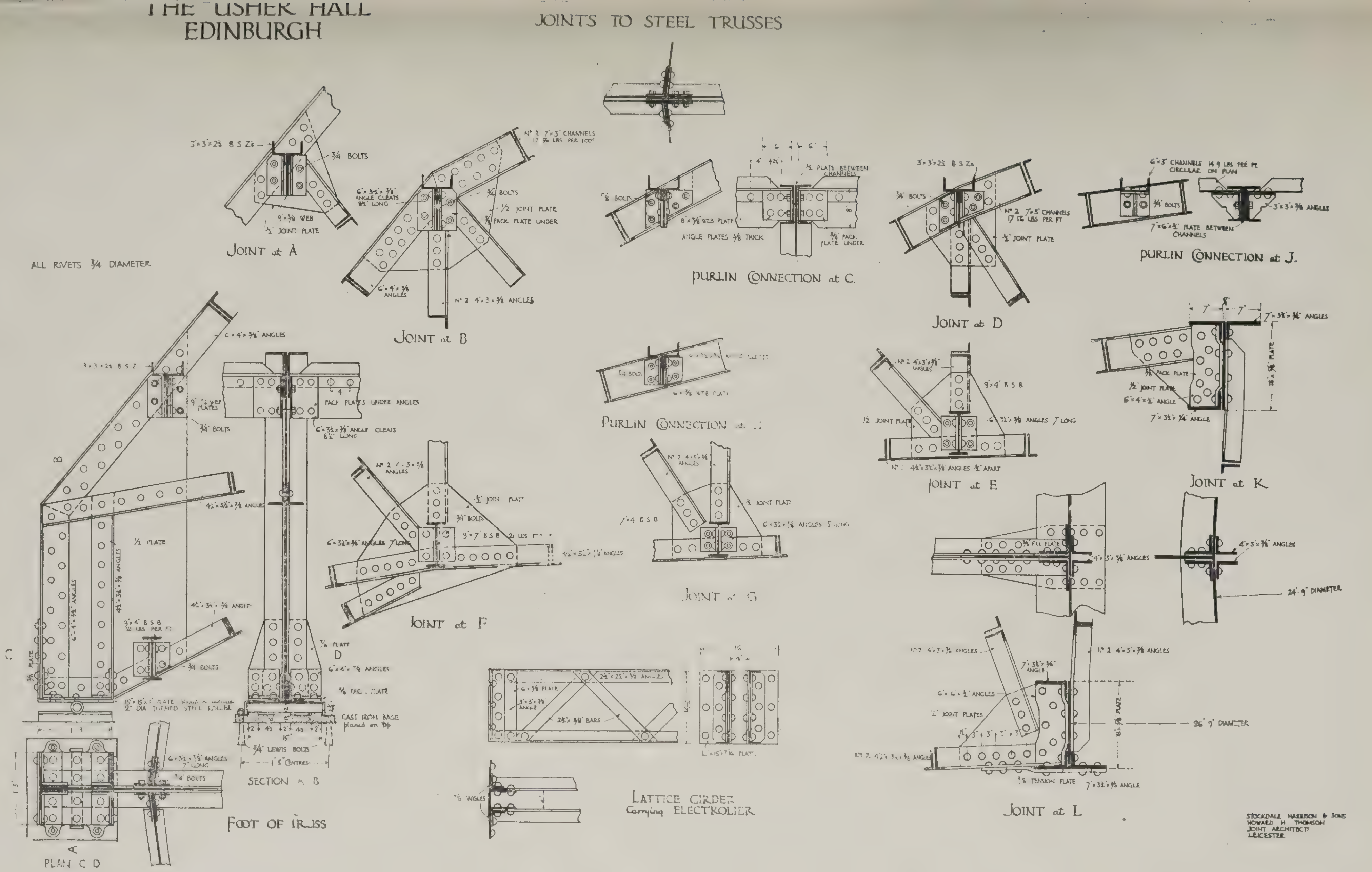


THE USHER HALL, EDINBURGH: STEEL FRAMING TO DOME AND ROOF.

There are twenty-four main half trusses running radially from the curbs to the outside wall of the building. These half trusses are about 46 ft. span, and the top and bottom flanges are connected respectively to the top and bottom curbs. Each truss is divided into five main panels, except at the springing, where the bays are further broken up (see double-page supplement). It will be seen from the illustration that the main bracing is of N type, this being the most economical arrangement, as the struts are vertical and the ties diagonal. In plan these trusses are about 3 ft. 6 in. apart at the curb and about 15 ft. 6 in. apart at the wall. The top flange of the trusses is composed of two 7 by 3 in. channels, except at the springing, where it changes to two 6 by 4 by ⅜ in. angles. The bottom flange is made up of two 4½ by 3½ by ⅜ in. angles. The vertical a diagonal bracing throughout consists two 4 by 3 by ⅜ in. angles, and these riveted to ½-in. gusset plates at all c nections. The gusset plates are in centre between the two channels of flange and the two angles of the braci thus giving double shear on all rive These plates are also cut large enough three rivets through each pair of an



THE USHER HALL, EDINBURGH: PART PLAN OF STEEL FRAMING TO DOME.



THE USHER HALL, EDINBURGH: DETAILS OF JOINTS TO STEEL TRUSSES.

bracing, thus ensuring a good connection, not only between bracing and flange of truss, but also between adjacent sets of bracing. The latter is a point which is sometimes overlooked.

The top purlins carrying the timber of the dome itself have already been described. They are connected at each panel point by means of angle cleats and ¾-in. bolts, the latter passing through flange and gusset plate. The lower purlins supporting the ceiling are composed of 9 by 4 in. R.S.J., the two inner rings being reduced to 7 by 4 in. to suit the shorter spans. The ceiling framing is made of light angles and flats hung from the bottom flange and arranged to suit the different mouldings in the ceiling. The latter is divided into large panels with bold simple mouldings, rectangular in plan, filled in with scroll-work and is very effective. Many of the ceiling panels are perforated with holes, through which fresh air is pumped into the building, the ventilation being on the Plenum system.

The bearing of each principal on the walls is arranged on steel rollers. A one-inch plate is riveted to the foot of the rafter, and a machined cast-iron bed plate carries the rollers. The latter are 2 in. in diameter turned steel, and are flanged at each end so that the two plates form a guide for the rollers. The cast-iron bed plates are bolted to the walls; the rollers allow free movement of the end of each truss radially, but prevent movement of the roof as a whole. (See page 359.)

The loads allowed for in the calculations are as follows:

Timber taken at 40 lb. per cubic foot.

Boarding 1 in. thick at 4 lb. per foot super.

Copper and felt, including laps, at 2 lb. per foot super.

Fibrous plaster ceiling and framing bars 12 lb. per foot super.

Snow was allowed for at 5 lb. per square foot, and wind pressure was taken at 50 lb. per foot super. on vertical surface.

The correct allowance for wind pressure on any large surface is always a difficult matter to decide, and in the case of a dome the question is further complicated by the curvature. When the horizontal pressure has been fixed the actual load on each purlin is determined by resolving the wind pressure at each panel into its components; this probably gives a fairly accurate allowance for the varying curvature. It is common practice to take 40 lb. per square foot as the horizontal pressure. Edinburgh, however, is a windy place; as far as the writer is aware, it is the only town in Great Britain in which four-wheeled cabs have been known to be blown over. This is probably due to fierce momentary gusts concentrated by the buildings on some exposed portion of the street, and the same wind would not exert anything like the same force on any large building or structure. The allowance of 50 lb. per square foot, however, seems a wise provision, and should meet the requirements of the case.

The method adopted for the erection of the building and roof was very ingenious and effective. A central timber staging was erected in the middle of the hall, with strong posts well braced together. On this a large crane worked until all the stonework was erected up to the springing level. This crane was then removed, and the bottom curb was erected and wedged up to its exact position on the staging. The top curb and the principals were then erected, and when all were bolted up the staging was removed. An interesting fact in connection with the erection is that when the last principals were being fixed the curbs in the centre rose bodily off the wedges until quite clear. This was no doubt due to an allowance for camber having been made in the lengths of the struts and ties, or possibly to slight settlement in the staging.

The contractors for the steelwork were Messrs. Redpath, Brown and Co., Ltd., and as the work all appears to have come together with little or no trouble during the erection, considerable credit is due to them for the accuracy with which the work must have been measured and made.

The architects for the building are Messrs. Stockdale Harrison and Sons and Thomson, of Leicester, and it is due to their courtesy that the writer is able to give these particulars of this interesting roof.

Expanded Metal lathing was used for plaster work in ceilings, wall coverings, circle-fronts, etc.

THE DESIGN OF STEEL AND REINFORCED CONCRETE PILLARS.*

An interesting paper was read before the Concrete Institute at the 48th ordinary general meeting on April 16, 1914, at 7.30 p.m., by Mr. Oscar Faber, B.Sc., Assoc.M.Inst.C.E., A.M.I.E.E., A.C.G.I., M.C.I., entitled "The Design of Steel and Reinforced Concrete Pillars, with Special Reference to Secondary and Accidental Stresses." Mr. Faber divided his paper into two sections. He first dealt with jointed construction such as structural steel, and secondly with monolithic construction such as reinforced concrete. With regard to the case of a girder resting on the end of a steel stanchion, he stated that in several drawing offices he knew as a fact that the construction in such a case would be treated as centrally loaded. He proceeded to argue that such was not the case because, when a load was applied to the beam, it would deflect, and the end, originally horizontal, would assume a certain slope, and therefore one of two things would happen, namely:—(a) The end of the girder would lift, in which case the whole load would be carried on one flange, so causing eccentric loading, or (b) the column must be constrained to adapt itself to the slope of the girder, in which case a bending moment would be introduced into the stanchion by such constraint.

In this way he showed that increases in strains of 140 and 480 per cent. respectively were obtainable.

Mr. Faber took secondly for consideration the case of a girder resting on an angle bracket. He argued that if an ordinary bracket were used the action would not be very far from the face of the leg of the angle, since the horizontal leg of the angle would not be strong enough to resist the bending moment which would be produced in it. It followed therefore that although the horizontal leg of the angle served a useful purpose in connecting the girder to the stanchion it must not be thought capable of supporting it. In effect, the construction became dangerous if the clearing between the face of the stanchion and the edge of the girder exceeded the thickness of the angle.

The author supposed there were few engineers present who would assert that this limiting clearance was never exceeded in practice, and an engineer had to carefully consider whether it was desirabl o employ this type of bracket except for qu small reactions.

He next considered a stiffened bracl Confining attention to cases where e workmanship was good, he assumed t t the stiffening angles had been machine r forged to fit the angle bracket perfec and that the bracket was initially horiz tal. It followed that when the gir r deflected there was a tendency for it to t on the outer edge of the bracket; and r very small loads there was no doubt t t this actually happened. As the load creased the outer edge of the stiffen yielded appreciably, and a greater a supported the load, the reaction gradu approaching the face of the column. T author's practice was to make the web f the stiffeners sufficient in area to carry reaction under a uniform stress of 7½ to in 2.

In calculating the resistance, he igno a large area of steel in the flange of stiffeners, and in the vertical leg of angle bracket, because:

(a) The clearance between the face f the stanchion and the end of the gir might be sufficient to prevent bearing this steel.

(b) Even if it was not, this mater could not be stressed appreciably until stiffener webs are greatly overstressed

In any case the difference in cost tween good and bad brackets was extremely small percentage of the cost f the steelwork, and a smaller one of the c of the building, and he declined to danger the "ship" for what in this ca might be fairly described as a "ha'porth tar."

It has long been recognised in go practice that the machining of the ends stanchions was of the first importan The author added that even whe stanchions are machined a careful engine must satisfy himself that they are machin truly square. Architects should bear mind also that apart from the danger volved in these practices, the yielding stanchions and brackets before they obta their bearing involved unknown and un tended stresses on the stonework, and the author's knowledge many a beauti and costly façade and interior decorat work had been badly cracked by bad ste work details and workmanship.

From the consideration of Case I. would appear to follow that it was des able to make these joints somewh flexible, and occasionally this was so. buildings were braced with diago braces he should say without question th stiffness of connections should be avoide Unfortunately, such bracing had obvio objections, and the whole stiffness of pra tical buildings against wind lay in the sti ness between beams and stanchion There was, therefore, no alternative b to make the joints stiff and to make t necessary allowance for those secon ary stresses in the design of stanchion This might be onerous, both in requiri extra labour and an increase in materi but a conscientious engineer would grud neither the one nor the other.

Mr. Faber then dealt with the design cleats. A common method of calculatin the safe reaction of a cleat was to take it the sum of the resistances of the rivet the effect being to neglect the very appr ciable stresses due to bending.

Dealing with the bracing of pillars, M Faber said that it was well known th pillars failed by buckling. This phenom non was fairly well understood, and the are sufficient experimental data availab to make the design of pillars, with refe ence to what he might call primary buck

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* Summary of a paper read before the Concrete Institute.

, a comparatively simple matter. The
omenon to which he referred was that
econdary buckling, in which the pillar,
ead of buckling as a whole, fails by the
vidual buckling of its component mem-
. On this subject there appeared to
practically no experimental data and
tically no formulæ or rules for the
lance of a designer. The importance
is problem might be gathered from
fact that bad design in the matter of
ing in pillars was certainly responsible
he two greatest failures in recent years
e Quebec Bridge of 1907, and the gas-
er in Hamburg.

r. Faber then proceeded to the second
ion of his paper treating of monolithic
truction and the eccentricity of beam
tions on pillars therein. Whereas in
l construction the eccentricity was very
ite and easily calculated with most
mon types of brackets, with reinforced
rete the eccentricity could only be cal-
ted from considerations of elastic
re, and the problem was a much more
cult one.

here was, however, no longer any
se for claiming ambiguity, since the
lem had been analysed very com-
ely in "Reinforced Concrete Design,"
numerical examples fully worked out.
he author took as an example the case
he outside column of the building,
king it out in detail, showing very
t increase in stress over the values as
narily calculated. If thoughts of
ntricity were banished either from
rance or under stress of competition,
actual maximum stress would have
1,300 lb. in 2.

is interesting to note that the outside
r in good design did not suffer much
ction in size up through the last three
. This was in accordance with the
practice in steel-frame buildings.

Reinforced-Concrete Grand Stand.

will be remembered that the timber
d stand at Hurst Park was destroyed
ire. The new stand has been built on
prevention principles, of reinforced
rete. It is 164 ft. long, 52 ft. deep,
36 ft. high, is of three floors, and will
mmodate 7,500 spectators. The mem-
' luncheon-room is 62 ft. by 39 ft.,
there are two grill-rooms, each 37 ft.
. by 39 ft.

Pudlo Waterproofing.

wo tons of Pudlo are being used for
cement waterproofing of the base-
ts, etc., of a States bank now being
t in Sydney.

essrs. Kerner-Greenwood and Co.
e issued a booklet dealing with the
erproofing of lime with lime Pudlo,
ch, a by-product of cement Pudlo, has
found by tests to prevent disintegra-
of lime mortar by frost.

The Belgian Cement Industry.

spite of the large increase of the out-
in the Belgian cement industry during
nt years, and the fact that the margin
rofit between the cost of production
sale price is small, it is stated (accord-
to the Brussels correspondent of the
imes") that schemes are still being
sidered for erecting three new cement
ks in the neighbourhood of Zeebrugge,
Huy, and Maestricht respectively for
manufacture of Portland cement. If
ied out these schemes will bring the
ber of cement works existing in Bel-
n for the manufacture of this special
s of cement to a total of twenty. Be-
se of these developments forecasts re-
g to the industry are inclined to be
my.

THE ARCHITECT AND STRUCTURAL ENGINEERING.*

BY WILLIAM E. A. BROWN, A.R.I.B.A., M.C.I.

At the beginning of his paper, Mr. Brown said that an architect was necessarily a structural engineer, with the addition of the artistic sense and skill to clothe the structural forms with beauty of line and contour, and to arrange mass and void into one harmonious whole. They would all agree, he thought, that the architects of such buildings as the Church of Santa Sophia at Constantinople; St. Peter's at Rome; the Pantheon, Rome; the Duomo of Florence; and to come down to a more recent time, St. Paul's Cathedral, and Westminster Cathedral, were structural engineers.

Were not all our cathedrals wonderful examples of architects' engineering skill?—majestic buildings with vaulted roofs poised on slender pillars, and held in position by flying buttreses, each thrust met by a counter-thrust, all combined so as to keep the whole structure in a stable condition.

Structural engineering included not only steelwork used in buildings, but also all forms of construction, whether in brick, stone, timber, or concrete, and in designing buildings and other structures the architect was called upon, not only to exercise his artistic ability, but also to plan and arrange the various materials to carry safely, in addition to their own weight, all super-imposed loads and external forces, so that the whole might remain perfectly stable.

It was the architect, and the architect alone, who should determine the position of all main girders, stanchions, and supports. In many buildings it was impossible to proceed with the design until these positions were determined. In some cases it was the roof which was the determining factor in planning a building —whether the spans should run from north to south or east to west. In others it would be such a feature as a dome; for example, how could Wren have planned St. Paul's unless he knew beforehand how he was going to support that great crowning feature of his design? That building could not have been erected had Wren simply made a drawing and handed over the structural work to someone else to deal with; or had that course been adopted, the resulting design would have been different from that made by the architect.

It was not his intention or wish to belittle in any way the status of the consulting engineer, who occupied a very important position in the building world. But what he did wish to emphasise was that it was the architect's duty to determine the position of all girders and supports in the buildings he designed. He should also be able to make the necessary calculations for the steelwork in at any rate, the smaller buildings under his control. Architects often did employ consulting engineers to do the calculations for the steelwork—first for lack of time to do so themselves, and often because, in some modern buildings, the steelwork was of so complicated a character that it was advisable and necessary to do so; but that did not alter the question of the position of the architect in the matter.

A good deal of stress had been laid upon the question as to whether the steelwork should be designed and quantities taken out by the consulting engineer before being sent to the constructional firms for estimates, or whether these firms should be allowed to do the calculations themselves. For contracts involving a large amount of steelwork of a complicated character, the author agreed that a consulting engineer should be appointed by the architect, but there were many smaller works where this was not necessary, nor would the outlay on the building work warrant the expense incurred. It was quite satisfactory, given certain conditions laid down for the architect to send the drawings to several firms of engineers, and let them make their own calculations and quantities; but to enable the various contractors to estimate on the same basis, the following information must be given to each :—

1. Plans of all floors showing the lines of all main girders and the positions of stanchions and columns; also a section or sections and outline elevations.

2. The loads that each floor had to carry, and whether live or total loads.

3. Whether British or foreign steel was to be used, and whether the L.C.C. regulations under the General Powers Act, 1909, were to be complied with. If not, the stresses should be specified that were to be worked to.

4. Whether price was to include for hoisting and fixing, or only for steelwork delivered to site.

5. If it was to be delivered unpainted, painted, or oiled, and if painted with what materials, and that all scale and rust must first be removed.

6. Workmanship, whether connections were to be riveted or bolted, and if the latter, whether ordinary bolts would be allowed.

7. Whether the price was to include 10 per cent. profit for the builders or only $2\frac{1}{2}$ per cent. cash discount.

The author's practice was to state the latter.

There was a diversity of opinion as to whether dead loads and superloads on a floor should be kept separate in making the calculations, or whether a load to include the dead weight of the floor itself should be taken. The author's practice was to work to the latter, as the calculations were much simpler and the possibility of error was materially reduced.

One should, of course, take into consideration the point loads which often occurred from partitions, etc. This was often neglected in making competitive calculations, but some of the concrete partition blocks on the market weighed a considerable amount.

Another matter that he sometimes had to argue with the steel contractors was the central loading on girders carrying walls with openings and narrow piers between. Some assumed that the loads were evenly distributed over the span through the brickwork below the window-sills. If the sills were very high up, this might be so, but in many cases the sills were only 12 in. or 18 in. above the girder, and, in his opinion, the loading in such a case should be considered as a point load, or as a distributed load over a length of the girder equal to the width of the pier.

In calculating the loads on stanchions, etc., he did not take advantage of the reductions allowed by the 1909 Act. He did not think it advisable, as buildings were often loaded to a greater extent than was allowed for.

When the various estimates and plans showing the steelwork were received the architect should carefully go through each set and compare the sections of the girders, etc., and make rough calculations to check the sizes, and ascertain if the allowable stresses had been adhered to. It was also necessary to check the depths of the joists in relation to the span; otherwise undue deflection might occur.

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* Summary of paper delivered recently before the Concrete Institute.

After the plans had been gone through the architect was in a position to determine which estimate he would accept, and when giving the general contractor instructions to accept the estimate it was important to state that all dimensions were to be taken from the site and that the whole of the work was to be carried out to the architect's satisfaction, and detail drawings of all parts were to be submitted to him for approval. The steel contractor must take his own dimensions from the site, arranging, of course, with the general foreman which portions of the steelwork were to be delivered first and the order of delivery of the remaining consignments. When the cleared site had been measured with steel tapes and all angles carefully triangulated, it should be possible for engineers to set out and scale off the lengths of the various parts. The connections and workmanship were, in the author's opinion, very important matters, and as far as his experience went they did not always receive the attention that should be given them. Of what use was it to have a strong joist or stanchion if the cleats under the joist or the joists under the stanchion were not properly designed, or, if the design were correct, the connections themselves were badly made? It was a regular practice to use ordinary bolts to take shear, such as the ordinary ¾-in. bolt in a 13-16-in. hole, the shank being threaded to within ⅜ in. of the head. He had examined connections made in this way, and often out of five bolts in the connection four of them could be taken out with the fingers when the nut was removed. What amount of bearing area did one get on the threaded end of the bolt, supposing that the bolt was bearing on the plates? The bearing surface consisted only of a series of knife edges. If bolts must be used in shear, then the holes must be carefully drilled concentric through all the plates without the usual amount of clearance, and bolts with plain shanks long enough to pass right through all of the plates should be driven in. In order to make sure of having no portion of the threaded end bearing on the outer plate a ⅜-in. washer should be placed under the nut. He was aware that the 1909 Act said that rivets should be used in all cases where reasonably practicable, but there were a very large number of buildings to which this Act did not apply. He thought that all steelwork should be designed in accordance with the provisions of the 1909 Act, but that the conditions for bolted work should be amplified in the Act, the only requirement now being that the bolt should extend through the nut and the latter be secured so as to avoid risk of becoming loose. Another important point, and one that was not always attended to, was that all holes through two or more thicknesses of metal should exactly coincide.

Filler joists in concrete floors should be bolted or cleated at least every third joist to the main beams. He had seen cases in which this was not done, the fillers simply resting on short cleats on beams connected to stanchions running through three floors, and with no other tie than that afforded by two ¾-in. bolts at each floor level; the end stanchion, built on the face of the party wall with only 4½-in. brick casing round it, was not tied in at all. He believed it was becoming a common practice to place the smaller filler joists on a concrete haunching resting on the bottom flange of the main girder and not tied in any way to the girder. In his opinion this method of construction should be condemned. The area of the stanchion bases should be checked to see that the concrete was not loaded more than 12 tons to the square foot. Large gusset plates should not be allowed unless properly stiffened to prevent buckling. It was a good practice to encase the whole of the stanchion base right up to the floor line with concrete. This prevented rusting, and also held the foot of the stanchion firmly in position. He did not advocate the putting of stone templates under stanchions. There was no difficulty in bedding both the template and stanchion, and if the latter had to be grouted in, the stone might as well be absent. Girders supporting wall, as well as main floor girders if they were formed of two or more plain I-beams side by side, should have plates riveted on top and bottom. Simply to bolt them together was not, in his opinion, sufficient, as the load from the main floor girders was not transferred to the outer joist, though some engineers thought it was.

Caution should be observed in casing girders and stanchions with patent plasters, especially those that were stated to adhere without the intervention of any lathing.

Stanchions and girders were best encased with fine Portland cement concrete, the steelwork having ⅛-in. wire wound around, and spaced about 12 in. apart. This held the concrete firmly in position, and it was not easily damaged.

CONCRETE IN MODERN INDUSTRIAL BUILDINGS.

At the annual meeting of the Textile Institute, which was held in Manchester on May 9th, Mr. W. E. Potts, A.R.I.B.A., delivered an address on modern industrial buildings. Dealing with the advantage of concrete roofs in one-storey buildings he said the main reason why they were not found in Manchester was the extreme conservatism of the Lancashire man, who saw no need for change from what has accompanied success in the past. In France and Germany tradition was not nearly so binding, and fireproof sheds with concrete roofs were regarded as perfectly satisfactory.

Turning to the question of spanning wide spaces, Mr. Potts said that when Lancashire men first turned their attention to the problem the Roman idea of arch construction in small bricks was the principle on which they worked. In the modern use of reinforced concrete they were in a sense going back beyond the Roman times—spanning wide spaces with flat slabs—and it was worthy of remark that with the adoption of a construction which was in spirit a development on the lines of Greek work, they had also in modern design a return to Greek feeling.

"I cannot," he said, "detect more than coincidence in it, but the fact is worthy of note in passing. We are probably only doing what the Greek would have done 2,000 years ago if he had had our knowledge of materials, but with his artistic sense he would have made a beautiful thing of it, and we certainly have not been able to do that yet."

Discussing what he considered an ideal fireproof construction, Mr. Potts spoke favourably of a reinforced concrete building in which the floors, girders, walls, and pillars had the steelwork or metal entirely covered with concrete, so that no metal would be exposed to the action of fire, though a modification might be necessary in buildings designed for machinery.

REINFORCED CONCRETE AN ELECTROLYSIS.

The Proofing Bureau of Darmst Technical High School reports the re of experiments made to ascertain how wandering electricity currents are resp sible for the rusting of the metal in re forced concrete. The conclusion reassuring.

Electrolytical action, says the report, in only when the concrete is damp, it further attacks only the iron bind which serve as anodes, the cathode ir remaining unaffected. Even the an irons deteriorate sufficiently to ca fissures in the concrete only when the c rents are strong and have been at th work a long time.

Electrolytical action results only fr continuous currents; alternating curre have no effect. Where continuous c rents are present the reinforced concr should be kept dry by isolation or ot measures. In the experiments wh brought out these facts was used a curr of 1-10 ampere strength, with a density 50 milli-amperes per square centime The density mentioned is 70 times grea than the density which, as judged by Association of German Gas and Wa Experts, causes danger to undergro conduits, and, therefore, requires prev tive measures. From this it is conclu that reinforced concrete underground, e when damp, is exposed to no danger fr electrolysis; while overhead wor bridges, etc., which have to reckon w still lower densities, are further, as a ru also protected by their dryness.

Professor Rohland, of Stuttgart, repo on the testing of a reinforced concr bridge in which the binders were of c iron. He says that, both mechanica and in its freedom from oxidation, the c iron gave satisfactory results.

TOWN PLANNING SCHEMES.

It is understood that the L.G.B. ha given authority for the preparation of n further town-planning schemes under Housing and Town Planning Act, 19 The schemes are authorised to be prepa by the Corporations of Manchester, Ne castle-upon-Tyne, and Wrexham, Urban District Councils of Beckenha and Oldbury, and the Rural District Cou cils of Wrexham and Rotherham.

In the case of Manchester three schen are authorised to be prepared, one relati to an area of about 3,230 acres, situat partly in the city and partly in the urb district of Chadderton, and two relati to areas of 186 and 86 acres situated who within the city.

In the case of Newcastle-upon-Tyne scheme is to extend to an area of 1, acres in the eastern portion of the city.

In the case of Wrexham borough scheme will apply to an area of 813 acr of which a small portion is in the rural d trict of Wrexham.

In the case of Beckenham the schem to relate to an area of 1,475 acres, that to be prepared by the Oldbury Urb District Council is to apply to an area 137 acres, situate in the rural district Halesowen.

In the case of the rural district of Wr ham the scheme is to apply to an ar situated partly in the parishes of Stans Gresford, Acton, and Gwersyllt, within rural district, and partly in the borou of Wrexham, and comprising 4,096 acre

In the case of Rotherham the scheme to relate to an area of 1,112 acres situ e parishes of Brampton-en-le-Morthen Laughton-en-le-Morthen within the l district.

ECIAL LEGAL REPORTS.

ch of Covenant and Dilapidation Claim.

Florence v. Bentwich.

3. Official Referee's Court. Before Mr. Muir kenzie.

his was a claim by Mr. H. S. Florence, wner of Nos. 1 and 3, Falcon Square, , under an under-lease granted to H. Bentwich, barrister-at-law, for breach of covenant, and dilapida- . The actions, which were two in ber, had reference to No. 3 and No. 1 ectively.

appeared that the leases were granted ly, 1899, and that the plaintiff's claim for dilapidations, rent, and mean pro- o the date when possession was trans- d. In consequence of alleged breach venant in neglecting to keep the pre- s in repair notices were served upon lefendant in March, 1913, and in Sep- er the writ was issued in an action possession and dilapidations. An r for possession was granted in Feb- y of this year. In the covenant for irs there was a proviso that the defen- would at the end of his term remove loors connecting the houses and block he entrances, but that had since been by the plaintiff, and after the issue e writ other repairs had been carried but, it was contended, not all which urveyor reported to be necessary, and remaining items were in dispute. of the main items of the claim was 12s. 6d. for blocking up the communi- ns between Nos. 1 and 2, but that unt had been paid into court, and the ndant had also paid into court £150 in rd to dilapidations.

. E. Bates, surveyor, of Queen Vic- Street, made a specification, and said that the repairs were not commenced at the date of the writ. The repairs were, in fact, put in hand by the plaintiff, and the builder gave an estimate of about £245 for work required to be done.

The premises were warehouse premises, and there was a crane connected with them, which was out of repair, and which would cost to repair about £24. Defendant paid into court £150 in respect of the dilapidations and £150 in respect of rent and mean profits, which plaintiff said was not enough. The rent was paid up to Midsummer of last year, and possession was received on February 21 of this year, and the plaintiff's calculation of the mean profits showed a sum of £263 11s., for which he claimed.

The lease was said to have some forty-five to fifty years to run, and the defendant could not be compelled to comply entirely with the covenants until the end of the term, a fact which gave rise to difficulties. During the past ten years, defendant said, he had spent £400 on the property.

The Official Referee reserved judgment.

ALLEGED STREET BEGGING FOR LOCK-OUT FUNDS.

At Marlborough Street Police Court last Saturday a labourer was charged on remand with begging. It was stated that he had accosted men in Jermyn Street, asking them to buy tickets relating to the builders' strike. The prisoner, in defence, said he was not begging. He was authorised by the Shamrock branch of the United Builders' and Labourers' Union, to which he belonged, to sell the tickets. Mr. Schloesser, for the defence, said he relied on the case of Pointon v. Hill. In that case a number of men on strike in a colliery district were found with a "children's bread wagon" and collecting books, begging, and the Court of Queen's Bench quashed the conviction on the ground that there was no habitual begging. Mr. Mead thought it was not necessary to show that the begging was habitual. When persons collected for hospitals, the hospitals benefited and not the persons who collected the money, but the present case was different, for the prisoner himself and the union he belonged to would benefit by the collections he made. The prisoner would be discharged, but a case should be stated to have the matter settled.

It is probable that a case will be stated.

COMPETITIONS.

School, Chorley.

Chorley Education Committee have decided to invite competitive designs for a new cookery and handicraft centre, to be erected in Queen's Road.

Municipal Offices, Warrington.

Warrington Town Council are considering a proposal to invite competitive designs for new municipal offices, which it is intended to erect at a cost of £50,000.

Hythe Concert Hall.

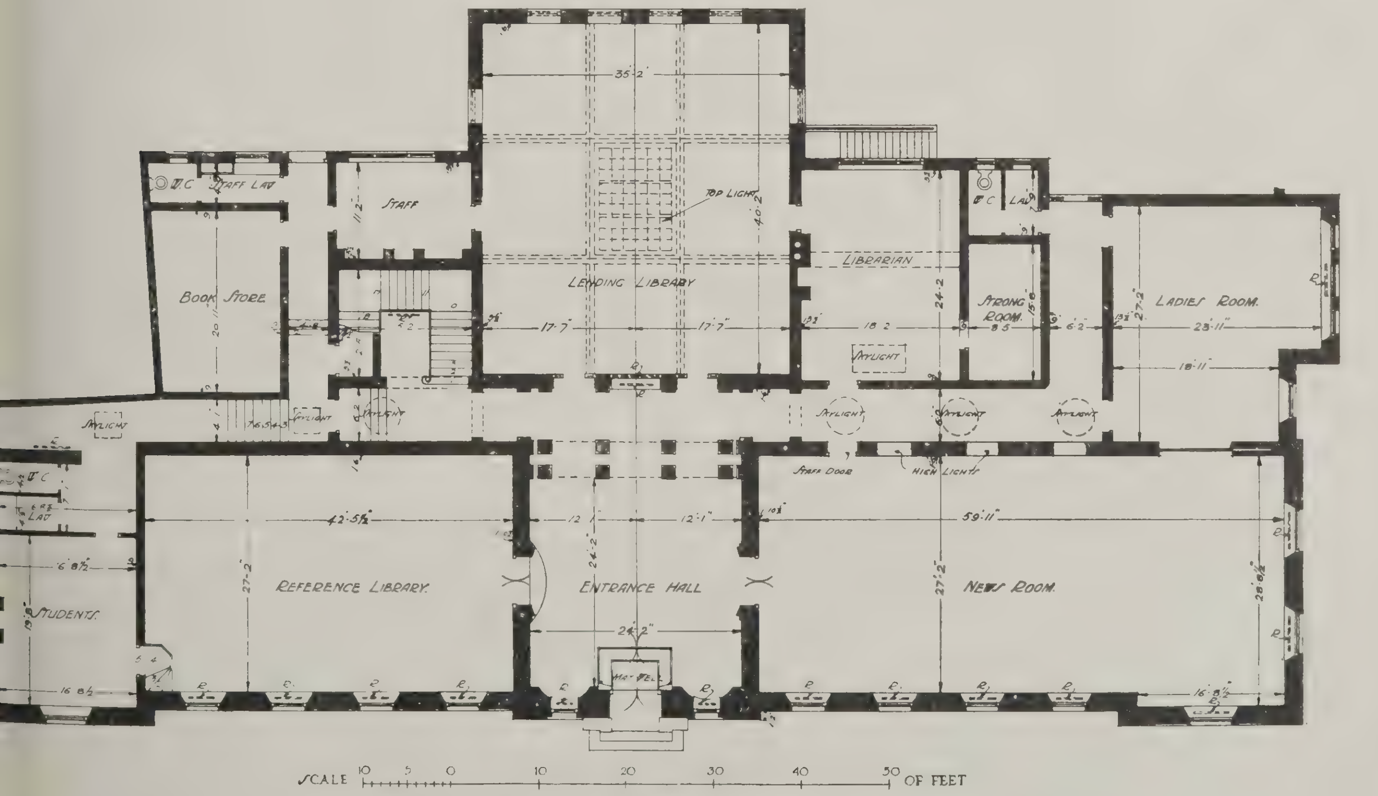
We are asked to state that Members and Licentiates of the R.I.B.A. must not take part in the above competition, the conditions not being in accordance with the published regulations of the Institute for architectural competitions.

Town Hall, Newcastle-upon-Tyne.

A recommendation has been adopted by the City Council suggesting that competitive designs be obtained for a new town hall, proposed to be erected in Eldon Square. The total estimated cost of the scheme, which will involve the demolition of buildings occupying an area of nearly 7,000 square yards on the north side of the square, is £300,000.

Workmen's Dwellings, Chester.

The City Corporation of Chester are inviting designs for workmen's dwellings to be erected on their estate at Hough Green,



LINCOLN FREE LIBRARY: GROUND-FLOOR PLAN. REGINALD BLOMFIELD, R.A., P.R.I.B.A., ARCHITECT.

(See Supplement and note on page 352.)

for which a general development plan has been prepared. Mr. Patrick Abercrombie, of Liverpool University, is the assessor. The authors of the designs placed first, second, and third will receive premiums of £50, £25, and £10 respectively. Designs are to be sent to the Town Clerk, Town Hall, Chester.

TRIBUNAL OF APPEAL UNDER THE LONDON BUILDING ACTS: AMENDED REGULATIONS.

New regulations (sealed in accordance with a resolution of the Tribunal on April 23, 1914) as to procedure in appeals under the London Building Acts, 1894, 1898, 1905, 1909, that have been recently issued by the Tribunal of Appeal, in substitution for the regulations of February 21, 1895, include the following revised provisions:

> Witnesses to be examined on oath or affirmation, and to produce all documents that may be required of them.
>
> Witnesses may be made to appear by subpœna of a Master of the Supreme Court (King's Bench Division), and are to be liable to process of contempt of court for disobedience.
>
> Costs may be taxed upon the request of the Tribunal, signed by the President.
>
> The Tribunal may state a case for the opinion of the High Court on any question of law.
>
> Fees payable to the Tribunal have been revised. For a hearing not exceeding five hours the fee is £5, with £1 an hour afterwards.

The new regulations are obtainable, price one shilling, at the office of the Tribunal of Appeal, 13, Great George Street, Westminster.

THE BUILDING TRADE CRISIS.

As briefly recorded in last week's issue, the council of the National Federation of Building Trades Employers of Great Britain and Ireland met at the Holborn Restaurant on May 11 to consider the situation in regard to the London dispute, which was caused by the workmen violating their agreements, and had then lasted seventeen weeks. The council unanimously passed the following resolution:

"Whereas the London Master Builders' Association has reported that it has this day received a request from the trade unions involved in the London dispute for a conference with a view to settlement, it is resolved, that before taking definite action in support of the London Master Builders' Association as indicated in the resolution of this council, the London Master Builders' Association be requested to accede to the request for a conference, including one of the National Executives of each of the eleven trade unions, and in the event of the parties refusing to accept terms that are within the recommendations of the National Board of Conciliation within ten days of such conference this council recommends a general lock-out as provided in the rules."

A conference was accordingly opened at the Holborn Restaurant on Friday, May 15, and, having lasted until about 10 p.m., was adjourned until the following Monday, May 18. We understand that the employers, while refusing to recognise the London Building Industries Federation, because it includes several trades that are unrelated to building interests, expressed their willingness to negotiate with the unions that are really involved in the issue. The employers, we are informed, further emphasised their determination to stand firm to the principles they have from the outset upheld, and generally to adhere to the policy embodied in the recommendations of the National Conciliation Board.

Monday's conference lasted until 11 p.m., when it was stated that certain suggestions for ending the dispute would be placed before a meeting of the unions involved. It was believed that the chief difficulties had been overcome.

OBITUARY.

Mr. Richard Creed.

Mr. Creed, who died last week, was architect and inspector to the Board of Agriculture and Fisheries for upwards of twenty-five years, and had a considerable practice in ecclesiastical and domestic work in London and the country. He served his articles under Mr. Hopkins, a Worcester architect, was for some years assistant to Messrs. Norman and Nesfield, and at the time of his death had been in practice for himself for about forty years. Mr. Creed was a prominent Freemason, and Lord of the Manor of Little Bradfield, in Essex.

THE FRANCO-BRITISH EXHIBITION OF ARCHITECTURE.

At the opening of the Franco-British Exhibition of Architecture last Friday, at the Jeu de Paume, Paris, by M. Paul Jacquier, Sous-Sécretaire d'Etat des Beaux-Arts, who was accompanied by M. Pol Léon, there was a brilliant assemblage of architects of both nationalities. Noticeable among them were MM. Jacques Hermant, president of the Société des Architectes Diplômés par le Gouvernement; Bérard, Defrasse, Godefroy, Pascal, Bernier, Girault, Laloux, Deglane, and other distinguished French architects, while the English visitors included Messrs. Reginald Blomfield, Ernest Newton, J. A. Gotch, W. Curtis Green, Gerald Horsley, Cart de Lafontaine, Horsnell, Yerbury, Atkinson, Geoffry Lucas, Batsford, A. W. S. Cross, Elkington, etc., most or all of whom were present at the banquet given by the Société des Architectes Diplômés in honour of the British architects, M. Viviani presiding. M. Jacques Hermant welcomed the British guests, and Mr. Reginald Blomfield responded. An orchestra of Beaux-Arts students supplied the music. An extended account of the exhibition will appear in our next issue.

DICKINS AND JONES' NEW PREMISES.

It was recently announced that the Regent Street premises of Messrs. Dickins and Jones, Limited, are about to be rebuilt. Upon enquiry, however, we are informed that the designation of the architects was made without authority. This disclaimer does not apply to us, as we were careful to seek confirmation of the rumour before giving it currency.

Model Answers to R.I.B.A. Examination Questions.

Owing to very great pressure on our space, we are compelled to omit Mr. Friskin's article from this week's issue. The series will be resumed next week with Model Answers to the Questions on Hygiene.

TRADE AND CRAFT

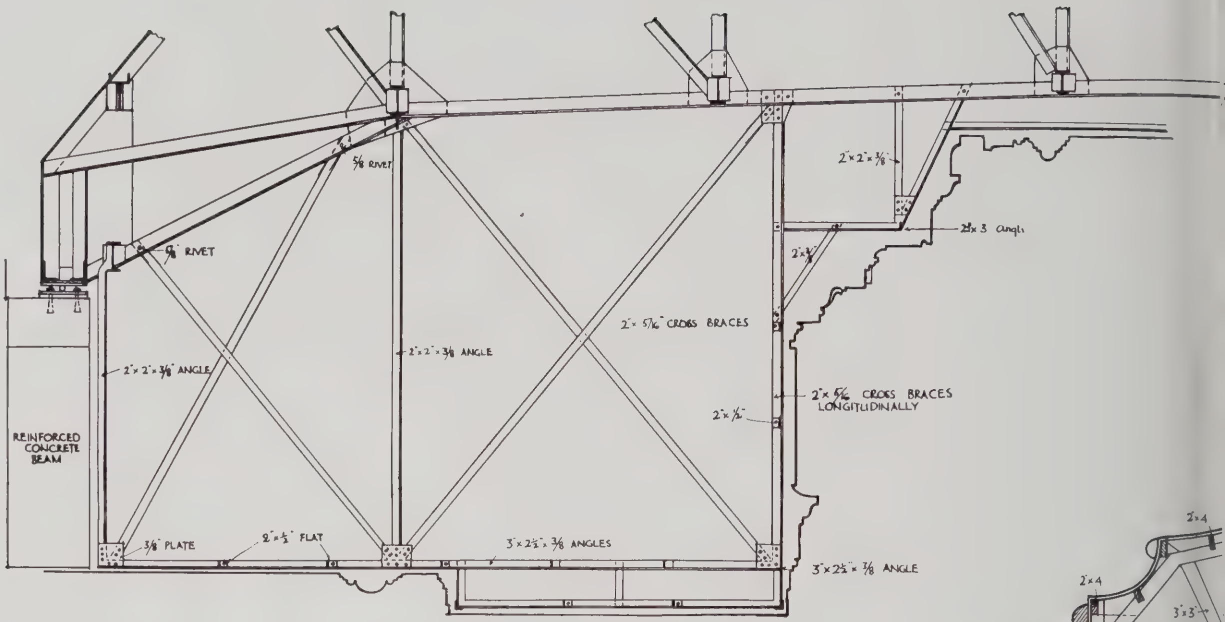
Annual Meeting of Messrs. E. Po and Co., Ltd.

At the second annual general meeti **this firm since its incorporation** as a p limited company, Mr. Edward Po the chairman, moved the adoption c report and balance-sheet for the year The resolution also included an auth tion for the payment of dividends a rate of six per cent. per annum o preference shares and ten per cent annum on the ordinary shares, car forward the balance of undivided bringing the reserve up to £4,302. resolution was seconded by Mr. Barnes, director and general manager carried.

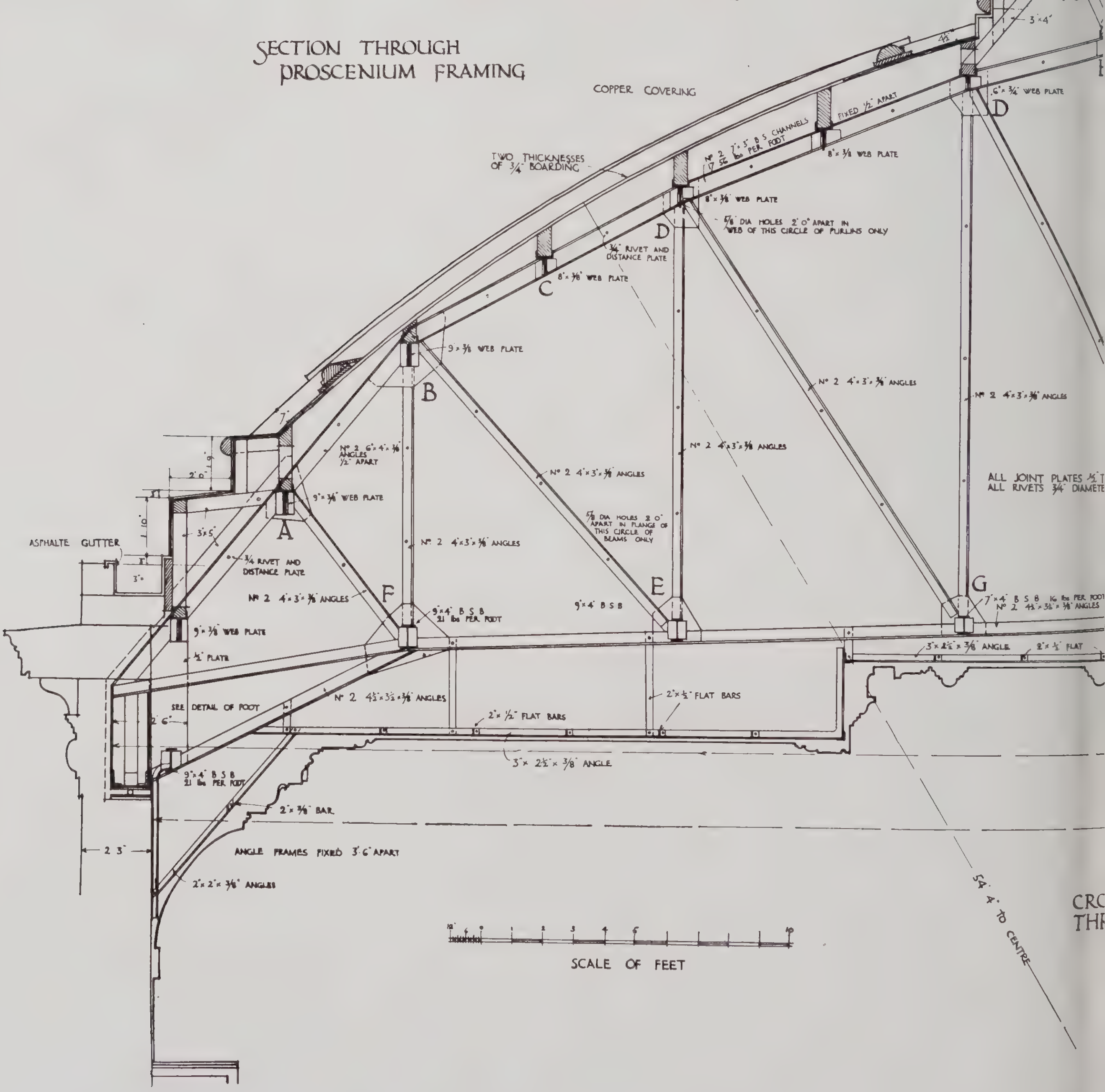
In the course of his remarks the man pointed out several satisfactory on the balance-sheet. The prelim expenses of the flotation of the com had been written off in full; the ite bad debts was phenomenally small in parison with the large turnover of the pany. The firm was now in its twe year, and the prospects of a wide e sion of business interests were brighter. During the whole of 191 said, Mr. Barnes and himself had engaged for the greater part of their on superintending the erection of the factory and organising the very num details of arrangement. The factory now practically complete and fully pied, and the company was per equipped to handle any contracts of fitting or show-case manufacturing, large or small, in record time and exceptional economy. Every depart in the works had been fitted up in the approved manner and with the most cient machinery. The staff of mach had been increased by six times, an numbers of mechanics had been add until now the employees numbered 600. Special attention had been pa lowering production costs without i way interfering with the high gra work for which the firm was famed. well-thought-out scheme of arrange the new factory had been planned so work proceeded straight through fro ginning to end, without any was labour or time. All the machine wor skilfully hand-finished; a better could be produced on these lines, infinitely lower cost, than by the method. Reference was also made t extraordinary success achieved by "Kwikserving" shop-fixtures, which, other new lines, had attracted a amount of interest at several impo exhibitions. Mr. Pollard added tha outlook for the shareholders was bright indeed. The home trade ha creased considerably, and they were curing very lucrative contracts in Colonies and on the Continent.

Mr. R. Thomson joined the boa Director, and Mr. F. W. Elsbury w elected. Messrs. A. R. Welchman Co., were re-elected as auditors.

Following the general meeting, extraordinary general meeting was h authorise the issue, as and when req of seven per cent. cumulative second ference shares. The rapid expansi the company's activities demanded fu capital. The existing preference s had been eagerly applied for this year were practically all taken up. The o ary shares were reserved, for the most for the directors, employees, and interested in the business. The inc of capital and new issue of shares agreed to.



SECTION THROUGH PROSCENIUM FRAMING



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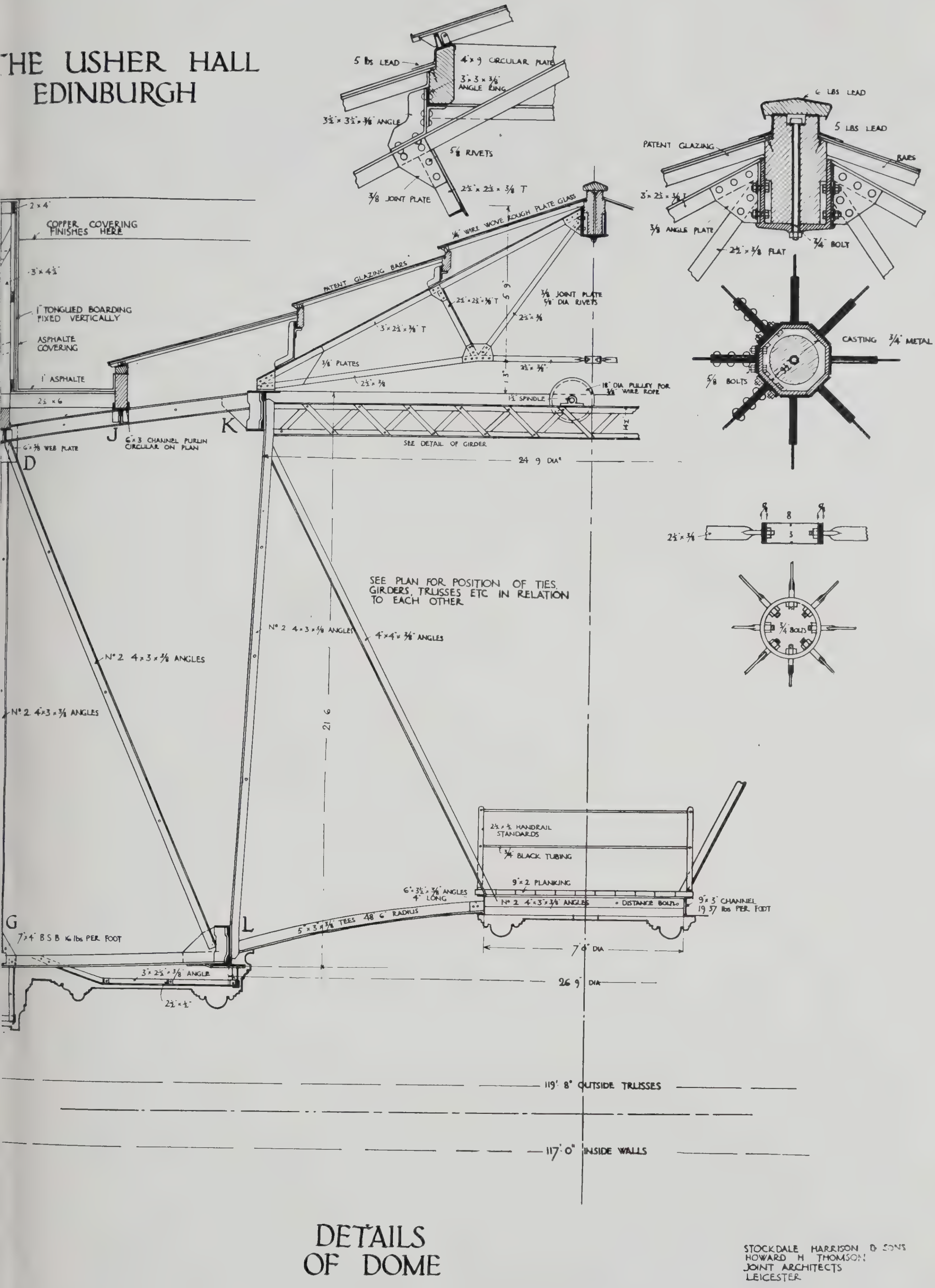
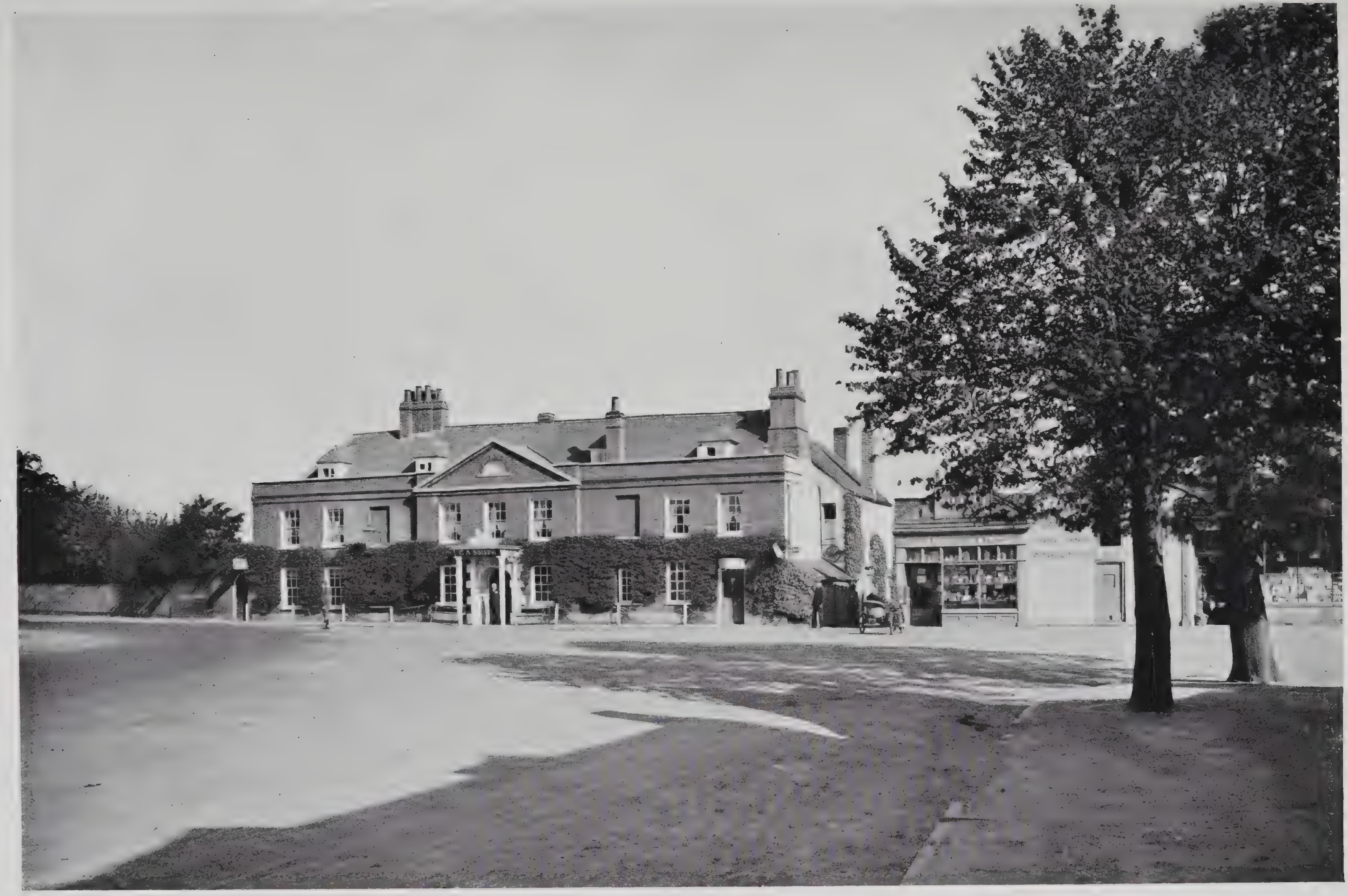
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES).

STOCKDALE HARRISON & SO

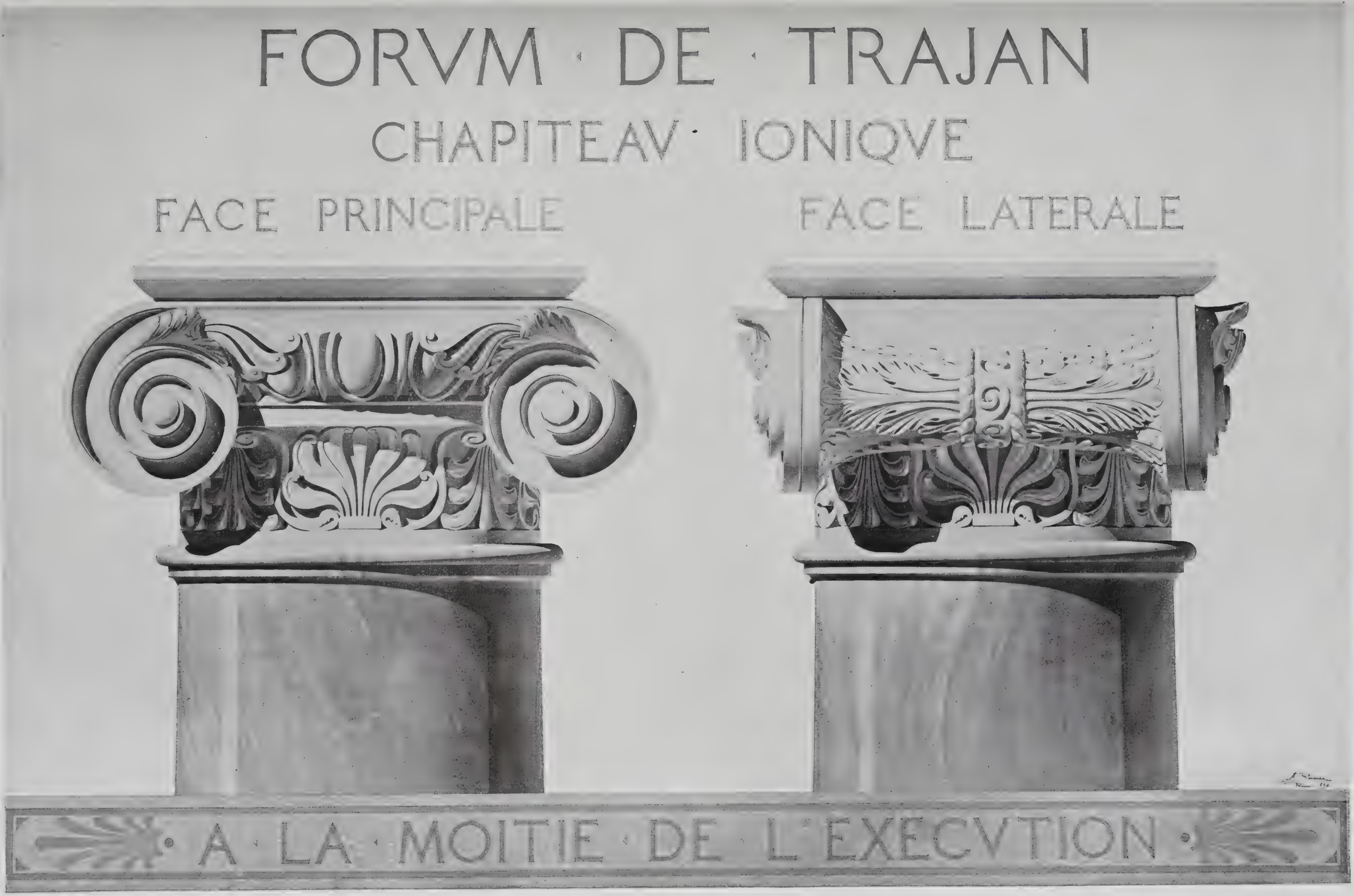


ER HALL, EDINBURGH: DETAILS OF STEEL CONSTRUCTION OF DOME.

D H. THOMSON, ARCHITECTS.



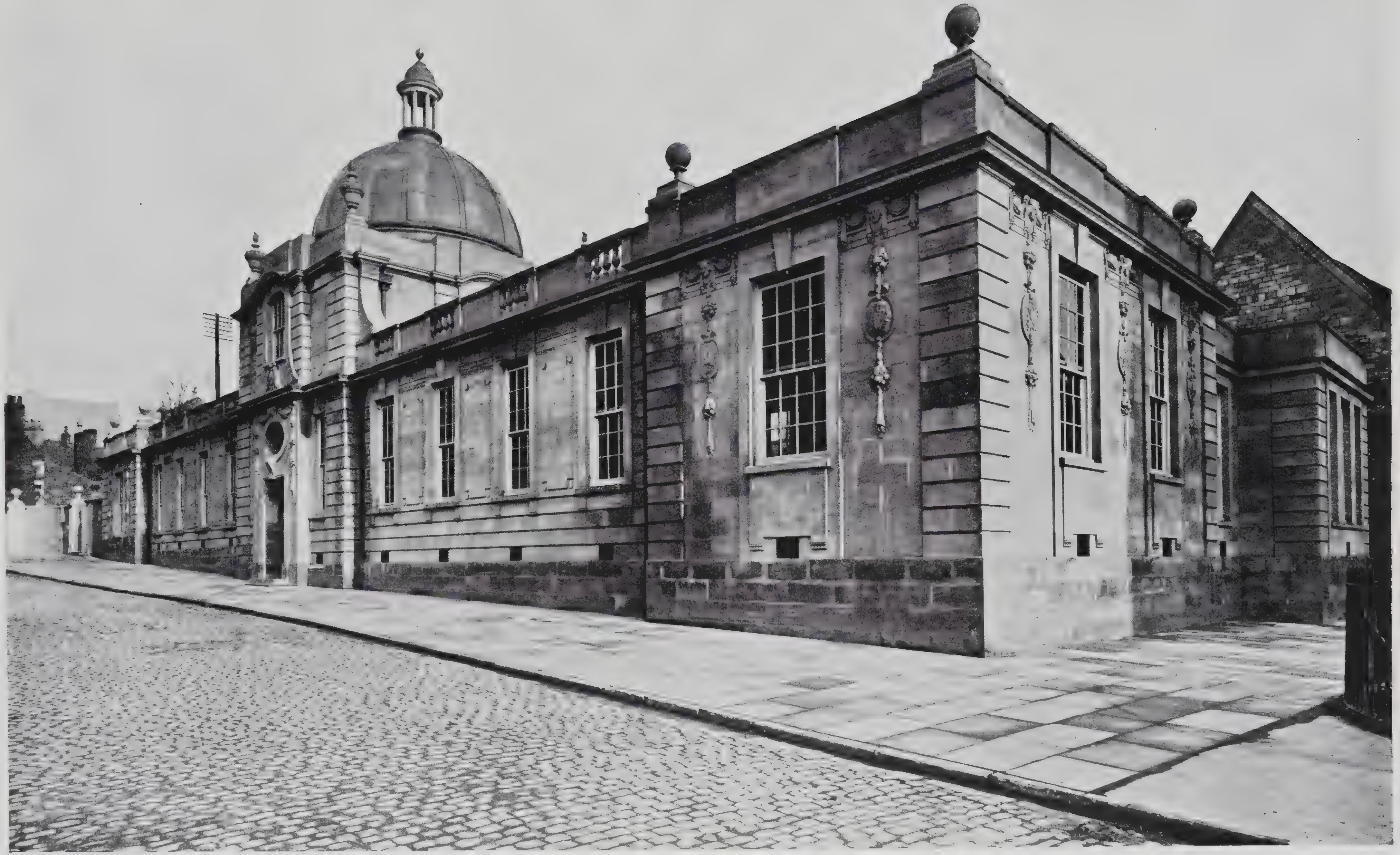
SMALL HOUSES OF THE LATE GEORGIAN PERIOD. IX.—THE WHITE LION HOTEL, COBHAM, SURREY.



STUDENTS’ DRAWINGS. XVIII.—IONIC CAPITAL, FORUM OF TRAJAN.

(GRAND PRIX DE ROME). BY A. RECOUVER.

(Reproduced by courtesy of the Massachusetts Technological Record.)



CURRENT ARCHITECTURE. LX.—LINCOLN FREE LIBRARY.

REGINALD BLOMFIELD, R.A., P.R.I.B.A., ARCHITECT.

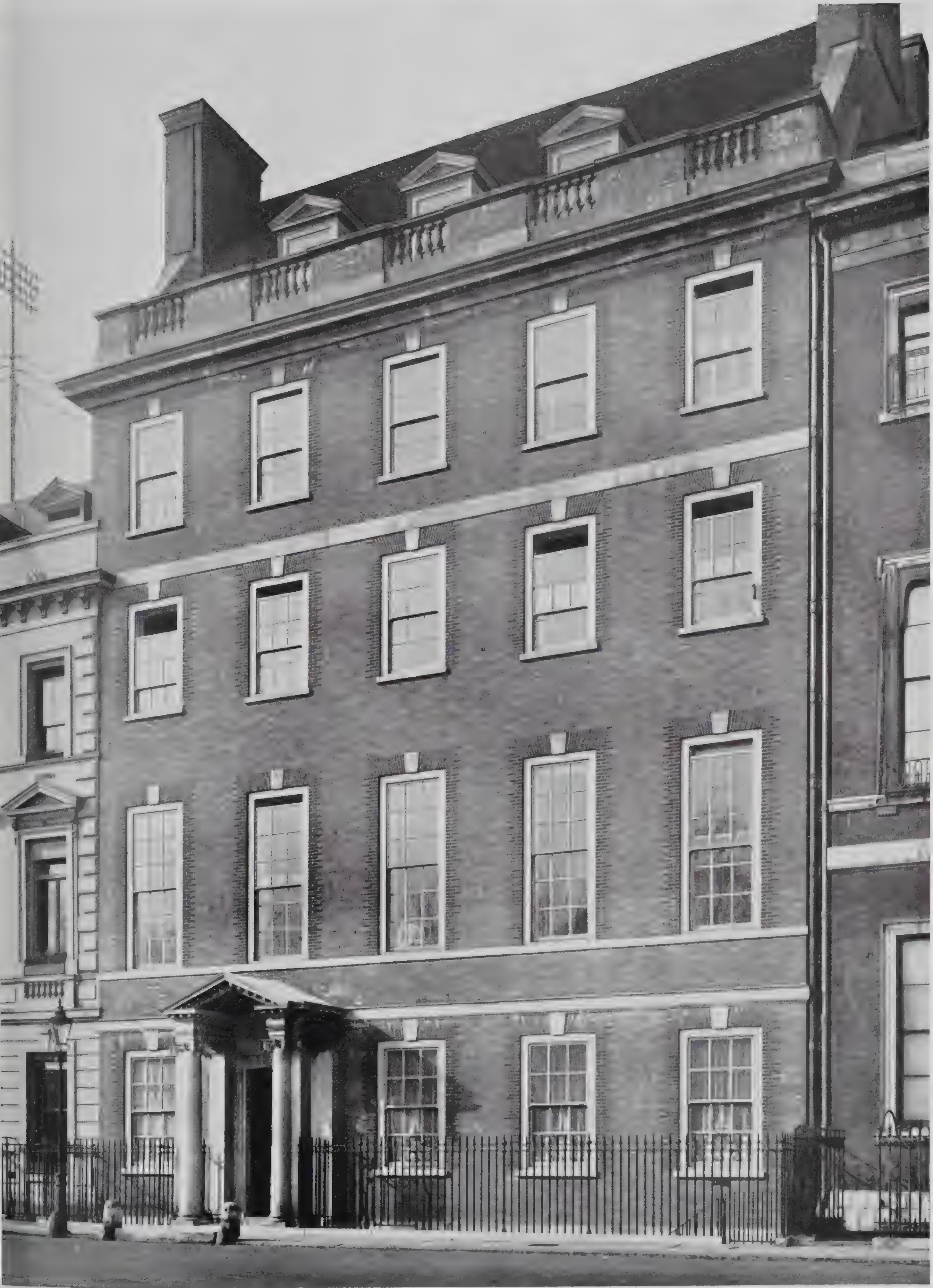


Photo : Bedford Lemere & Co.

CURRENT ARCHITECTURE. LXI.—No. 7, ST. JAMES'S SQUARE, LONDON.

EDWIN L. LUTYENS, A.R.A., F.R.I.B.A., ARCHITECT.

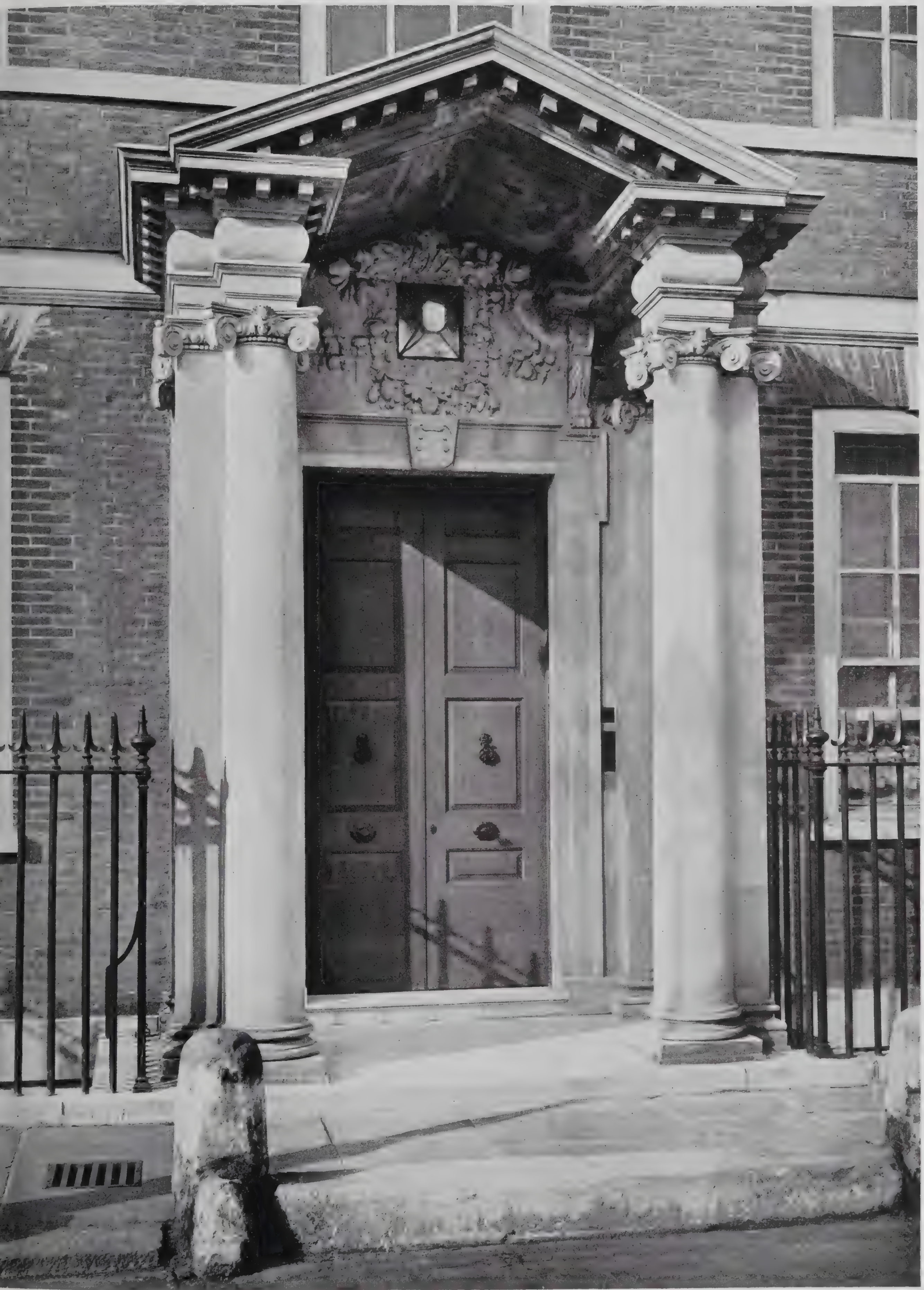


Photo: Bedford Lemere & Co.

CURRENT ARCHITECTURE. LXII.—No. 7, ST. JAMES'S SQUARE, LONDON: DETAIL OF PORCH AND ENTRANCE.

EDWIN L. LUTYENS, A.R.A., F.R.I.B.A., ARCHITECT.

FOR LOCAL AUTHORITIES' SCHEMES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art. = The Articles of the Town Planning Procedure Regulations (Preparation of Schemes by L.A.s), 1914. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = A Local Authority's Scheme under the Act of 1909. Owner = Owner within the Meaning of the Lands Clauses Acts. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets.

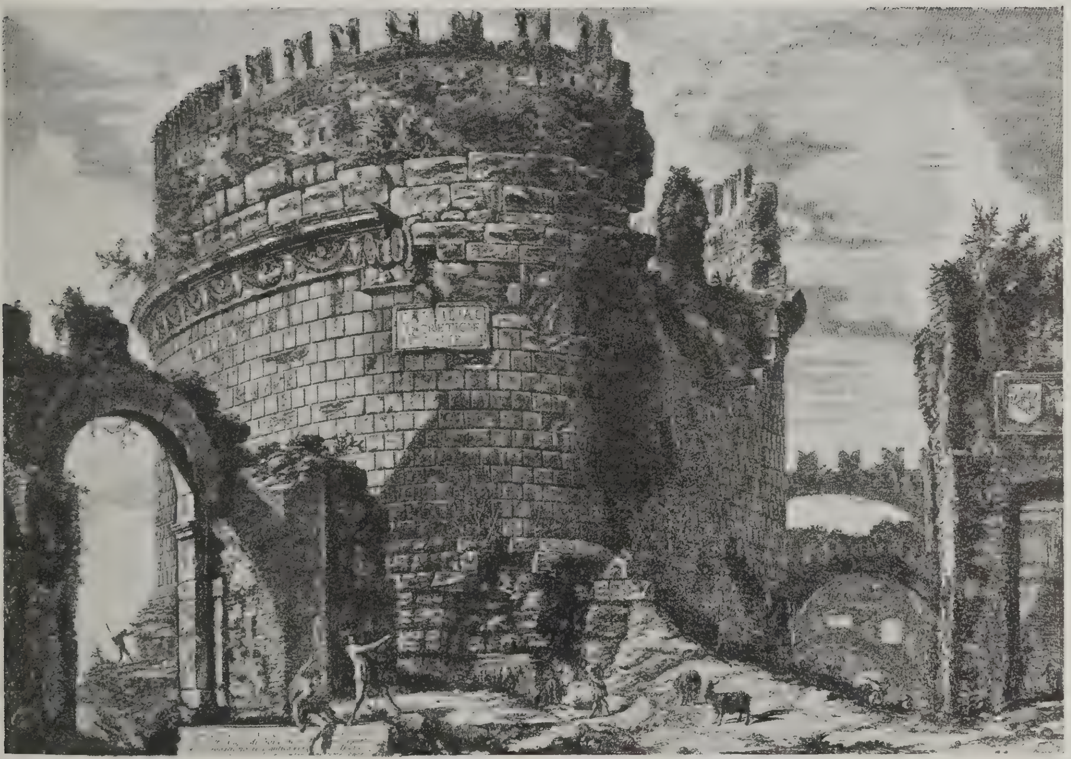
No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 6. In case L.G.B. modify scheme.	If Draft Order received from L.G.B. contains modifications Resolution to be passed by L.A. within ONE MONTH of receipt of Draft Order authorising submission to L.G.B. of any objections or representations by L.A. in regard to L.G.B.'s modifications and conditions, and approving Town Planning Committee's action in taking steps under Art. xviii. (*a*). [Art. xviii. (*a*) and (*b*)]	(*a*) Within FOURTEEN DAYS from receipt of Draft Order from L.G.B. serve notice required under Art. xviii. (*a*) upon Owners and interested Councils. Also upon C.C. if any main road affected. [Arts. xviii. (*a*) and xxvii] (*b*) Send copies of above Draft Order and Notice where necessary to (1) Board of Agriculture and Fisheries (2) Commissioners of Works. [Arts. xviii. (*a*) and xxvii] (*c*) Within FOURTEEN DAYS from receipt of Draft Order from L.G.B. advertise in Local Paper that Draft Order approving scheme with modifications is deposited for inspection. [Art. xviii. (*a*)]			For ONE MONTH from date of Notice and Advertisement (see Stage 6, Col. 3 (*a*) (*c*)) deposit Draft Order approving scheme with modifications for free explanation and inspection by any person or society interested who must make objections to or representations upon modifications to L.G.B. within the said period. [Art. xviii. (*a*)]		Within ONE MONTH of receipt of Draft Order approving scheme with modifications from L.G.B. send (*a*) L.A.'s objections or representations made in regard to modifications. [Art. xviii. (*b*)] (*b*) Certificate by Clerk or other person competent to certify containing information required by Art. xxiii. and exhibits in proof of compliance with the requirements of Art. xviii. The exhibits required are (1) Copy of form of notice served under Art. xviii. (*a*) (see Stage 6, Col. 3 (*a*); (2) Copy of paper containing Advertisement (see Stage 6, Col. 3 (*c*). [Arts. xviii. (*b*) and xxiii.]	If L.A. unreasonably refuse to consent to L.G.B.'s modifications or conditions, L.G.B. may, after holding a Local Public Inquiry, order L.A. to consent to such modifications or conditions, which order may be enforced by Mandamus. [Sect. 61 (1) and (3) Act of 1909] (*a*) L.G.B. decide to approve scheme with or without such modifications or conditions. [Art. xix.] (*b*) L.G.B. notifies L.A. of such decision and sends to L.A. a Draft Order approving scheme. [Art. xix.]

CHART OF TOWN PLANNING PROCEDURE FOR LOCAL AUTHORITIES' SCHEMES—STAGE 6.

THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, May 27, 1914. Volume XXXIX. No. 1012.

No. 86.



(From Piranesi.)

THE ARCHITECTS' & BUILDERS' JOURNAL.

MAY 27, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1012.

Picturesque Architecture.

THE picturesqueness of a work of architecture has nothing to do with the particular style in which it happens to be designed. Every work of architecture ought to be picturesque—that is, it ought to be capable of becoming part of a picture. We must ask ourselves, then, what are the conditions necessary to the making of a picture, and how can these conditions best be fulfilled by the design and arrangement of buildings?

In every picture there must be a unity, which is generally achieved by the creation of a centre of interest. All parts of the picture have a certain interest, but there must always be one simple form or element which gives cohesion to the whole and upon which our chief attention is focussed. A view can have unity, as the view of a single plain cowshed has unity, and it may have interest as the view of the miscellaneous array of buildings which comprise some iron-works has interest, but in neither case is it a picture, for a picture must have not only one of these qualities, but both at the same time; it must have both unity and interest. Another important element which contributes to pictorial effect is variety of plane. If all the objects in our vision are in one plane, the view is certain to be somewhat dull; it is very tiresome for the eye not to be able to extend and contract its range; on the other hand, a multiplicity of planes is equally tiresome. The conventional arrangement, and this is common to all schools of painting in both the East and the West, is to have three chief planes—the foreground, background, and middle distance. By this means the chief object of interest is neither too close to the spectator nor too far away from him, and its position is fixed by the special relation between itself and its neighbours. A solitary building, however beautiful, or even a terrace, if placed upon a desert, would never make a picture. Neither can a solitary ship upon a calm sea; there must be a rough sea, with curling, breaking waves to draw one's attention to the existence of a foreground, and for the background there is generally a cloud. Architects, however, are never permitted to rely upon clouds for the completion of the pictorial effect they wish to obtain!

Let us try to apply some of these principles to the composition of buildings. It is unfortunate that many of the devotees of what is commonly called "picturesque architecture" interpret the phrase in a narrow sense. To them it denotes prettiness and an assemblage of small features, such as gables, dormers, turrets, oriel windows, and so on. All these elements of composition can be very beautiful and have a distinct merit of their own. But the theorists of whom we are now speaking have this conspicuous defect: they have eyes for the small picture, but they have no eyes for the great picture, the picture which includes not only one building or small part of a building, but a whole street or even a whole city. Many of the most formal compositions are even more picturesque, in the true sense of this word, than are the haphazard arrangements of buildings one often sees in mediæval towns, for they comprise pictures which are nobler, of a higher unity
and more significant. On the other hand, there
assemblages of houses such as those in the ordi
"garden suburb," which individually may be charr
and even "picturesque," but which, consid
together, by no means constitute a picture, for
present an aspect of confusion and discord. There
more great pictures to be seen in the streets of
than there are in Nuremberg. The view of the O
up the Rue de l'Opera, that of the Madeleine up
Rue de la Madeleine, of the Pantheon up the
Soufflot, are all beautiful pictures; and what gra
picture can there be than the Louvre as seen from
gardens of the Tuileries? But not every formal
position is picturesque, and this is why formal arch
ture is disapproved of by some people; they think
of the instances where a certain rigidity has
attained without either unity or interest. Long stra
streets leading nowhere, and city plans of the mech
cal check-board variety, bring the art of civic de
into disrepute. A formal scheme that lacks the vi
of picturesqueness gives the maximum of offence,
one can sympathise with those who would keep
narrow, crooked streets of our English towns jus
they are rather than run the risk of sacrificing
interest which they now have without securing
higher interest which belongs to such formal sche
as only great artists can carry out. It is very diff
to fight against such a prejudice, and the formalist
tread warily and not make too great demands u
his countrymen, or they will reject him altogether.
the citizens of every town can be persuaded to de
their energies to the creation of at least *one* great s
picture, much will have been achieved. The be
and dignity of our towns would be vastly increa
and yet nobody would have any reason to fear th
dull and inartistic formalism would become univers

With regard to "picturesque" architecture, using
word in its restricted sense, nobody can adopt an in
rant attitude towards it. The many-gabled house
delightful in the country, and it only becomes int
able when introduced into the town, where its comp
disregard of its neighbours renders it an unwelc
intruder. When houses are set in congregation
must surrender some of their own individuality in o
to take their place as parts of larger units. The
way in which a town or village composed of
"unsocial" buildings can become pictorial in chara
is by the introduction of one immense building,
ferably a church, which towers over the scene; thus
miscellany of cottages which themselves compris
discord are reduced to a certain kind of order, and
pose into a group by reason of their subjection
single dominant motif. Our mediæval villages
made us familiar with this arrangement.

Much has been said about the relation betw
architecture and painting; it is not sufficiently insi
upon that the architect must be as familiar as is
painter with the art of pictorial composition. For
architect, especially if he be a town-planner as we
the creator of pictures, too—real pictures, vastly
significant and important than any which the pai
can produce.

C.

Circulation Figures.

HE action of "The Times" during the past week in challenging the "Daily Telegraph" to produce figures in support of the latter news- er's claim to the largest circulation will, we k, have been specially noted by our readers in view of the fact that a similar t has arisen between ourselves and the ilding News." We have challenged our emporary to disclose its certificated net sales, he "Building News" still observes a strict editorial ce on the subject. In its advertisement pages, ever, some statements have been set forth which ssume are to be taken as some sort of rejoinder ur own remarks. They make no direct mention nis Journal, though it is easy to read between the , and to recognise that the generalisations are nded to have particular relation to ourselves. s may be the least incommoding way of dealing what must be an awkward *contretemps* for our emporary, but the only impression it gives us is the "Building News" is endeavouring to evade point at issue. We have directly challenged our emporary's statement that it has the largest circu- n. Instead of making any reply to our specific lenge, about which there can be no misunder- ding, the "Building News" shrouds itself in ralities, plumes itself on the material it produces he profession, and, incidentally, observes that the ing architects of the day have been brought up on journalistic diet it provides! All this, however, side the mark. Will the "Building News" have courage to abandon this sort of reply, published ng its advertisement pages, and give in its edito- columns a direct answer to our challenge? In erica, we believe, there is a law by which a news- r can be compelled to disclose its circulation es; and when in England every newspaper to be stamped, similar means of determining the lation were available. But no such means are in our reach, and the "Building News" cannot efore be forced to disclose its net sales. If, how- , our contemporary continues to maintain editorial ce on the point we have raised, there can be, we k, only one impression left on the mind of the er—which is, of course, that the "Building News" not wish to take the risk of a comparison of its figures with ours.

Bath Street, Bath.

HE order has gone forth for the demolition or rebuilding of No. 9, Bath Street, Bath, on account of its being "in a ruinous state and dangerous to engers or occupiers of neighbouring buildings." probably means that the other houses which con- te the north side of the street will also have to go; hey have been practically derelict for a long time. sentimental grounds this is regrettable. Bath et is famous for its Ionic colonnade and for its ciations with a time when the Classic style of build- accompanied a passion for the extremes of social ette in what was then a fashionable resort. It s of an age when elegance and refinement were the hwords of the society that dwelt within its daries. But from what we remember, its colonnade e only feature that distinguishes the street from y contemporary ones, and even colonnades must be allowed to traverse the practical necessities ulated by the Public Health Act. There appears e no doubt that the building is thoroughly fe. That being the case, it is no use wasting tears them. Let the citizens of Bath, therefore, palliate loss by seeing to it that the site is occupied by a ing worthy of its traditions. It should not be diffi- to design an appropriate structure, since the ous model is probably familiar to every architect in ity, and to many outside it.

A Crusade Against Pillars.

THE Works Committee of the Westminster City Council has discovered that the pillars supporting the iron and glass shelter at the entrance to the Lyric Theatre obstruct the public way, and an order for their removal within six months has been given. A few weeks ago a similar *fiat* went forth in regard to His Majesty's Theatre, and we believe there are several other cases where like action has been taken. Whatever may be the advantage in employing pillars to support an iron and glass shelter in preference to other means, it seems rather strange that the lessees of these theatres should have thought it worth while to run the risk of having to remove their pillars at short notice. On the other hand, the pillars in question do not appear to us to inconvenience (and then not to a very serious extent) anybody except the pedestrians who prefer to walk along the outside edge of the kerb. If pillars are as obstructive as the Westminster Council apparently believes them to be, it would surely be better to prohibit their employment at the outset rather than to encourage the individual in the false hope that he may be allowed to retain them, and ultimately mulct him in heavier expense than would have been the case if he had employed other methods of support at the beginning.

The Lure of London.

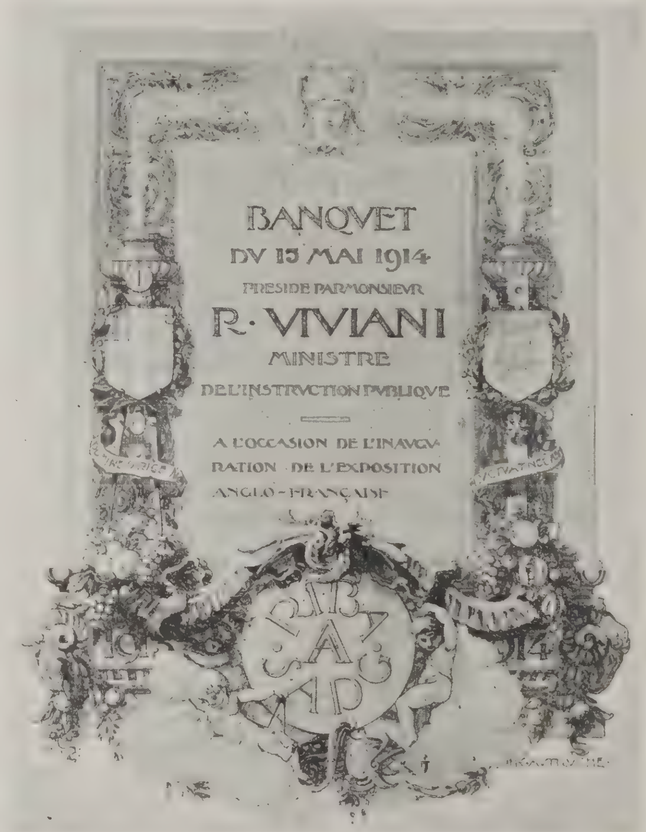
THERE is said to be a growing tendency of Londoners to live in London! Thirty thousand of them, it is stated, have, during the past year or so, forsaken their dolls' houses in the outer suburbs, and have come back to dwell within the inner ring. It is not as easy to account for this movement towards the centre as it was for that towards the periphery. London, from being, as the friars left it, a garden city, wherein the merchant slept over his shop and grew his own strawberries in his back garden, became impossible as a place to live in when commercial prosperity devoured every available foot of land, and the city was choked with business buildings. Then he sought refuge in the quiet squares a mile or two away. Later, he was tempted by improved means of transit to live farther afield—at Hampstead, or Blackheath, or Earlsfield. Finally the extremists went to Hove or Skegness; and now it would seem that a revulsion has set in, the City man having grown tired of his wagon-tilt roof and rainwater butts, or having found, perhaps, that the all-pervasive motor-car has robbed "country life" of its seclusion, while the multiplicity of the dolls' houses (and more especially of the rainwater butts) has destroyed their distinction. It is no longer worth while to waste so much precious time in travelling to and fro.

The Late Alderman Thompson.

BY the death of Alderman William Thompson, which occurred suddenly at Ruislip last Wednesday, housing reform has lost its most energetic exponent. An enthusiast who was also a man of action, not only did he conceive large and beautiful ideals of betterment, but he devised ways and means of materialising them, so that he inspired by example as well as by exhortation. To this country all other nations turn for light on the ever-pressing problem of housing; and on this subject they were not far wrong in regarding Alderman Thompson as the chief embodiment and expositor of experience, knowledge, and wisdom. This reputation was not lightly gained. It implies not merely a minute acquaintance with the multifarious factors of an intricate problem in sociology, but sufficient insight and ability to co-ordinate the many and various details into a sound working system of practical philosophy and philanthropy. Many a man who has done much less for humanity has been held to deserve a statue.

HERE AND THERE.

THERE can be no doubt that the *entente cordiale* found a very happy expression in the architectural visit to Paris. Of this visit, and of what was said and done officially, Mr. Cross writes elsewhere in this issue, and it does not come within my province to say anything further of that character. But it may be of interest to set down a few impressions I gained of French architects and French architecture, and to touch upon some of the unofficial incidents of the visit. First of all I should like to say how thoroughly the French do their work. Things are not taken up half-heartedly by them. The lay-out of the French capital, the magnificent scale of the great buildings, and the pronounced sense of civic dignity—all typify an attitude of mind which is at once extremely logical yet is alive with fresh thought, resourcefulness of idea, and brilliancy of imagination. We may pride ourselves upon doing some things better than they do them in France, but it will be frankly admitted, by all who know, that there is a great deal we can learn from France, and from Paris in particular. Although so many of us had been there before, I should say there was not a member of the party who did not return with fresh impressions. The inaugural banquet was an immense success. The presence of representatives of the State, notable sculptors, and eminent architects contributed largely to this. Chief among the architects was the veteran M. Pascal, plainly showing himself to be an old man, but with a tremendous fire in his eye that belied his age and gave evidence of an astonishing vitality. Then there was M. Laloux—a huge figure with stiff, black hair. The whole aspect of the man conveys a sense of power, and this is increased by the knowledge that M. Laloux has every honour possible to an architect in France—not least among his achievements being the large number of Grand Prix men who have been attached to his atelier. Then there was M. Ch. Girault, architect of the Petit Palais, and M. Deglane, architect of the main façade of the Grand Palais: but this is not the place to enter upon any list of those present. Suffice it to say that the company was a very goodly one: in fact, everything had a goodly aspect, except, perhaps, the French regimental orchestra, who looked as though they had got damp and had not dried well. When speech time came I was struck again by the wonderful fluency of the French speakers. I am afraid that our own speakers were rather poor in comparison. Mr. Blomfield, although he spoke in English, adopted a *staccato* style, with a pause after every three words, which was not effective following upon the preceding oratory. Architects, it is true, are not called upon to be orators, but it is a surprising thing what admirable speakers French architects are. I have noticed it time and again when Frenchmen have been at the Institute. The
evening, however, was not an occasion for crit
but for enjoyment, and no one could have been l
entertained than the English party were. If a
personal incidents of the trip were gathered tog
there might be much to tell, but each member
only have a glimpse of what happened in his
circle. I, myself, formed one of a little band lo
the Quai d'Orsay. The banquet was at the I
d'Orsay, and remembering that we were in
diplomatic quarter it was perhaps excusable, afte
direction of the gendarme to take the first tu
to the right, that we should have annou
ourselves at the portal of a noble building—a
of the old nobility. The concierge, however, di
expect us, and looked surprised when we said w
come to a dinner, but not so surprised as we did
we learned this was not the Palais d'Orsay, bu
official residence of
Legion d'Honneur;
own destination bein
the opposite side of
road, and no other
the large hotel attach
the Gare d'Orleans.
member of the party,
arriving in Paris,
covered that he had
his dress-coat behind
trusted that the pr
shade of his blue lo
coat would pass for l
if he kept on the s
side of the room!



BANQVET
DV 15 MAI 1914
PRESIDE PAR MONSIEVR
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MINISTRE
DE L'INSTRVCTION PVBLIQVE

A L'OCCASION DE L'INAVGVRATION DE L'EXPOSITION ANGLO-FRANÇAISE

The trip to Vers
was peculiarly en
able, because we
under the guidance o
architect of the Palace
the Conservator, and
had the *entrée* to s
parts which are not o
arily seen. We
particularly intereste
the theatre where
black cockade inci
occurred, precipitating
Revolution, and no
interesting was the
theatre where Marie
toinette used to act
her regal suite. It
instructive, inciden
both at Versailles and at certain other great build
of the French capital, to hear some of the En
criticisms: the views, for instance, of some mem
of the A.A. on the work of the greatest architects
sculptors which France has ever produced!
mightiest of them all was Gabriel, the incom
able. Really, if you go into a place like
sailles and start criticising the decoration
the point of view of the small suburban h
it is hardly likely you will reach a satisfac
result. When you attempt any sort of criti
of these great apartments you need to cal
a vision of pomp and circumstance, with train
royal personages and their suites in gorgeous costu
and, in the huge courtyards outside, a small arm
servitors with horses and carriages passing here
there and giving an effect of brilliancy and life w
the palace never can have to-day. One felt incl
to agree with the Frenchman's exclamation—"
grand, c'est magnifique, c'est pretty well."
Fontainebleau the same point arises, though
building is not on so large a scale. UBIQU

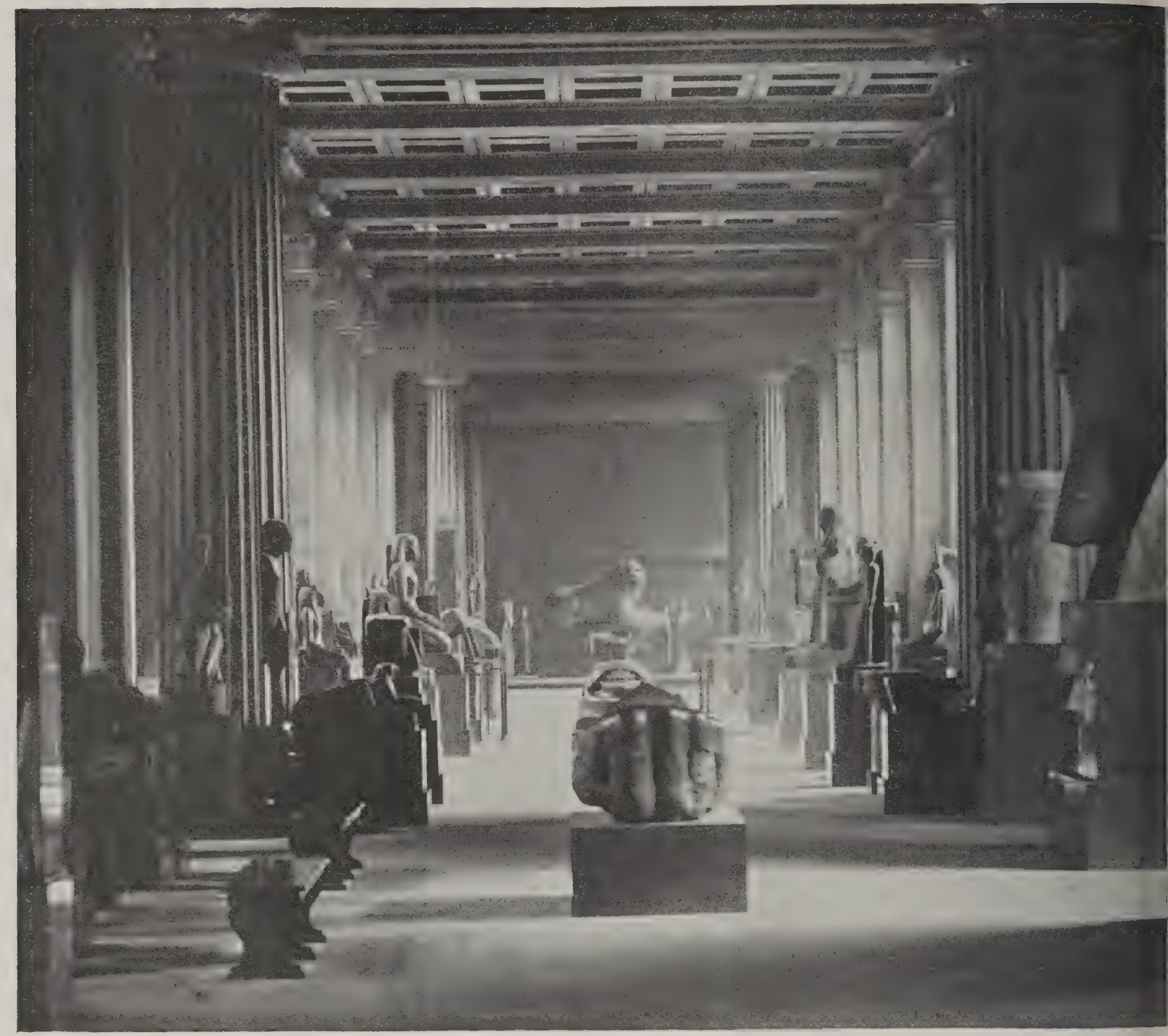
MODERN ARCHITECTS:—III. SIR ROBERT SMIRKE.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

R ROBERT SMIRKE presents a very great contrast both with Alexander Thomson and with Sir John Soane. His work was less spectacular theirs, and is lacking in any quality which might eivably be called eccentric or bizarre. He invented ew forms, and it was with great caution and rever-e that he employed the old ones. His work is some-s described as dull, sombre, and platitudinarian in t, and even tiresome, because he never makes a ake. Thus he has incurred the kind of odium h fell to the lot of Aristides the Just. With never-ng correctitude he puts columns and pediments in places where they ought to be put; he creates le compositions which have every element of per-on. The right emphasis is never missed; the re features of his buildings are of greater interest their extremities; but they do not assert them-es unduly and so appear to cut his façades wo; he does not place the chief entrance a building in its basement (as so many ern architects attempt to do with indifferent tic success), but raises it upon a flight of steps he level of the principal storey in the conven-l manner. He makes no dangerous experiments; lays no tricks with the Orders. There is unity, but triving after an impossible unity; there is sym-y, but only on the occasions where symmetry can ttained with ease. Most of his buildings are pon-us and solemn, but, then, they happen to be the buildings which *ought* to be ponderous and nn. A club-house in a great city should have a staid sober air, a General Post-Office should be free the reproach of flightiness, a National Museum not suggest frivolity. It may be a fortunate acci- that there was a demand for such buildings at a d when there happened to be in practice an archi- whose temperament was such that in a peculiar sure he was fitted to give them their proper note character. For he had that type of artistic genius m found among architects and almost never g painters. He was capable of complete self-ression, and had no other ambition than that his creations should take their proper place, and a rdinate place, if need be, in the scheme of things. m the social sense was supremely developed, with esult that his buildings are vested with an air of ction which can never be attained by artists who ent on self-assertion. One feels, when looking building by Smirke, that it is not the spirit of ke, but the spirit of society which has been em-ed there.

he had designed nothing else but the British eum his reputation would have been quite secure. architect of such a building is deserving of wide wn. And yet how few people among the general c have ever heard of Sir Robert Smirke or recog-that the British Museum is one of the noblest s of architecture that this country possesses! The is that it is so intensely appropriate for its pur- so unobtrusive and sedate, that most people take granted. But how we should all miss it if it d to exist and if its contents were housed else-e! How much of metropolitan worth and dignity d London be deprived of if this stately fabric were oyed! Critics sometimes complain that it is out ale with its surroundings, and that it is only fitted nperial Rome. It has even been said that "Eng-en have no right to such a building." This is an both to our capital and to our nation. London absorbed the British Museum just as it has bed St. Paul's Cathedral. It is true that neither em is provided with a grand setting; they are not end of great vistas, neither are they surrounded by wide open spaces. It is possible to argue, however, that when seen in immediate contrast with their smaller neighbours their majesty is enhanced. The view of St. Paul's Cathedral from Ludgate Circus has a unique beauty. The irregular narrow street, with its bustling traffic, and the little gilded railway bridge, seem to make a perfect foreground and foil for the superb architectural monument that dominates the scene. In this instance we have a pictorial effect such as Mr. Muirhead Bone delights to portray. In his drawings of Rome he seems to have taken particular pleasure in showing us a modern Italian terrace in juxtaposition to a structure such as the Pantheon, and the character of each seems to be accentuated by virtue of the comparison we cannot help instituting between them. Similarly, the British Museum is all the more stately because the buildings in proximity to it do not share its magnificent scale. Of course, a work of architecture is seen by a greater number of people if it is the centre of a large town-planning scheme, and can be approached from all sides; it is only intended here to lay emphasis upon the fact that even if we are prevented from having a grand lay-out of streets there is no reason why we should not have grand buildings which have a way of rising above the circumstances where they are placed and of declaring themselves in their natural splendour. Unfortunately many people, who have no special title to speak for their nation, keep on telling us that it is contrary to the nature of Englishmen to indulge in town-planning schemes. For "the loveliness that comes by chance" we must not substitute "the conscious street of France." And the same prejudice is raised against the introduction of Classic architecture into this country. But what Englishmen do it is their nature to do, and Inigo Jones, Wren, or Smirke are just as much English as are any of our Romantic poets and journalists, and there is no reason why these latter should be allowed to prevent us from expressing our admiration and reverence for the British Museum, which, in spite of its Classic origin, is yet an English building, and one of the chief ornaments of London.

The British Museum not only takes rank with Westminster Abbey and St. Paul's Cathedral as a unique national institution, but it is something more than this. It is a European possession, something which civilised people of all countries have a right to regard as their own. Sir Robert Smirke never employed his talents to better purpose than in the creation of this masterpiece; this supremely dignified structure whose solid, stable form seems so well fitted to give protection to the frail and precious relics it contains. This museum is of especial interest in that it is an example of the appropriate use of the heaviest and most ponderous form of Classic architecture. Only a few buildings, and the most important ones, are worthy of such a treatment. It is a structure such as the High School, Edinburgh, which brings this style into disrepute. If buildings of comparatively such small account as that are allowed to have the character of a great monument, it becomes utterly impossible to give sufficient artistic emphasis to those which have some public function to perform. The mediævalist has every right to regard with horror the prospect of streets in which huge columns and porticos are so plentiful that one becomes tired of them. It is only by economising these grand motifs that we can use them with advantage. But neither can we do without them. It is Smirke's notable achievement that he introduced into England an extremely ponderous type of architecture, which is exactly adapted to a certain sort of building. By doing this he increased the resources of the Classic style, while the devotees of other styles have no reason to complain.



THE BRITISH MUSEUM: EGYPTIAN GALLERIES. SIR ROBERT SMIRKE, R.A., ARCHITECT.

Such virtues as Westminster Abbey possesses seem enhanced when we can contrast them with the virtues of the British Museum. What Smirke gave to London was a new and distinctive note—a low and sombre note; a double-bass was added to the orchestral range. However uninteresting and "dull" his buildings may be declared to be, there can be no doubt that the interest of London as a whole has been increased thereby. He was one of those rare architects who continually had in mind the vision of a city. His offices, theatres, colleges, and clubs all have the appropriate character. They have a greater scale and dignity than the shops or private houses that surround them, so they are sufficiently differentiated from these; but, on the other hand, they do not show any of the features usually held to be distinctive of churches or town-halls. It is unfortunate that this tradition of reticence was interrupted by the Gothic Revival which gave us Law Courts bristling with steeples, and which so successfully banished the idea of a city from the minds of architects that long after they had begun to practise in the Renaissance manner they continued to add domes and towers to every building to which these adornments could possibly be appended. It would have been instructive if we could have heard Smirke's opinion of the very lively museum group at South Kensington!

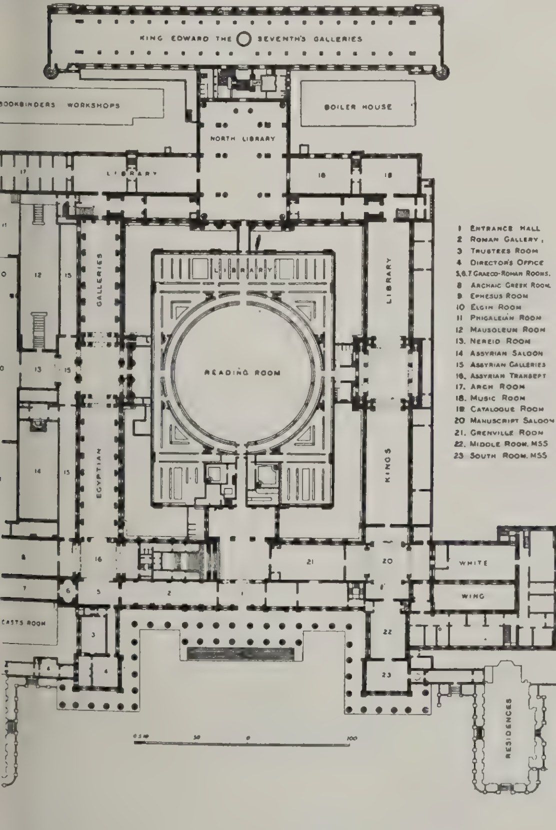
Now that the art of town-planning and of civic design is being revived, and it is becoming imperative that every architect should consider not only the
appearance of his own building, but also the app
ance of the street or city of which it forms a part,
likely that the name of Sir Robert Smirke will gro
prestige; and his repute will be even greater tha
was in his own day. To give some idea of the en
siasm with which his works were once regarded,
may quote a few sentences from Donaldson, who s
"I have seen all the great works that are in progre
Paris, and those which have been completed within
last thirty years, but having passed the previous
before the British Museum, I may be permitted to
this—I do not recollect having seen any building w
impressed me with such an idea of grandeur as
British Museum. There was an idea of magnifice
there was ample space, the building was conceive
a noble scale, and if it had been permitted him to c
out the sculptural decoration, which his mind embra
and his taste designed to grace those four pedimen
front, it would be one of the finest composition
modern times."

Sir Robert Smirke was born in London in 1781,
was the second son of Robert Smirke, a painter.
the age of fifteen he entered the schools of
Royal Academy, and was articled to John So
with whom he only remained a very short t
Addressing the Royal Institute of British Archite
few years after his death, his brother says: "
reasons which I do not know, but can only conject
he was removed from Mr. Soane's office after a la
of less than twelve months with his father's con

approbation. That his son took a lively interest s architectural pursuits during that time is evident contemporary letters now in my hands and essed to his father." This is all very obscure, and can only assume that Soane's irascible temper was than the boy could endure. In 1799 he gained Academy Gold Medal with a design for a national ry. In 1801 we went abroad with his elder brother ard; he visited Paris, but his experiences there not pleasant, for he had to escape as soon as he l, and it was with great difficulty that he avoided anent detention. In 1802 the Peace of Amiens declared, and the next year he went to Greece. He already acquainted with the works of Chandler, Roy, Stuart, and others; unfortunately his stay in ce was not of long duration, and upon Napoleon's t of invasion he returned to England and gned himself to the disappointment of his visions ofessional advancement and was prepared to put red coat and shoulder a gun for the rest of his ." One does not usually associate the name of ke with military manuals, but he wrote a book led "A Review of a Battalion of Infantry," which in use in the Army until 1840. He returned from ce through Sicily and Italy in 1805. There is not evidence from which we may learn anything t his opinions at this time; but it seems that the n-Gothic style found no favour in his sight. It is able that the bent of his mind was definitely set rds Classic architecture. It is all the more remark- therefore, that his first commissions were to n two large castellated mansions in the mediæval ner, Lowther Castle and Eastnor Castle. In 1806 blished a folio work, "Specimens of Continental itecture." In 1807 he was appointed architect to Board of Trade, and erected the greater portion of resent Mint on Tower Hill. His first great oppor- y arrived when, in the same year, he was asked to are designs for the rebuilding of Covent Garden tre at a cost of £150,000. We are told by his ner that "The vast and severe simplicity of the c shaft, capital, and entablature were for the first on a large scale to be exemplified in this metro- ; draped statues, types of the dramatic art, were to occupy niches, while sculpture in low relief, which he had admired so much in the Phidian cella and sculptures on the Acropolis, was to enrich the masonry of the surface. To these the classical genius of Flaxman and the careful execution of Possi were made contributory." A theatre does not often last long. "Its little life," as Prospero would have said, "is rounded with a fire." In 1856 this very beautiful building was burnt to the ground. In 1823 Smirke began the General Post Office and also the British Museum, the latter not being completed till 1847. From 1819-28 he was surveyor to the Inner Temple, where he erected the library and dining-hall. He also built the East Wing of Somerset House (1828-31), the College of Physicians in Trafalgar Square, now the club illustrated on page 372, the Carlton Club (afterwards rebuilt), the Union Club, the United Service Club (now the Junior United Service), and many noblemen's mansions. The Oxford and Cambridge Club was the joint work of himself and his brother Sidney. He was elected R.A. in 1811, and was treasurer of the Academy from 1820-1850. He was also an F.R.S. and Fellow of the Society of Antiquaries. In 1832 he was knighted. In 1834 he was an unsuccessful competitor for the rebuilding of the Houses of Parliament. He retired from practice in 1845, when Sir Robert Peel placed him on the Commission for London Improvements. He died in 1867. Among his pupils were C. R. Cockerell and Lewis Vulliamy.

Like Soane, Smirke paid a great deal of attention to the practical aspects of architecture. While it is to the credit of the former that he introduced heating systems into houses, Smirke distinguished himself by being the first to employ concrete for the foundations of buildings. He also initiated the present system of taking out quantities by employing surveyors on either side in order that proper estimates might be given. Until his time it had been left to the builder only to take out his own quantities.

In the next issue of this Journal there will be a brief criticism of Smirke's principal works and an analysis of his manner of architectural composition.



THE BRITISH MUSEUM: GROUND-FLOOR PLAN.

THE PLATES.

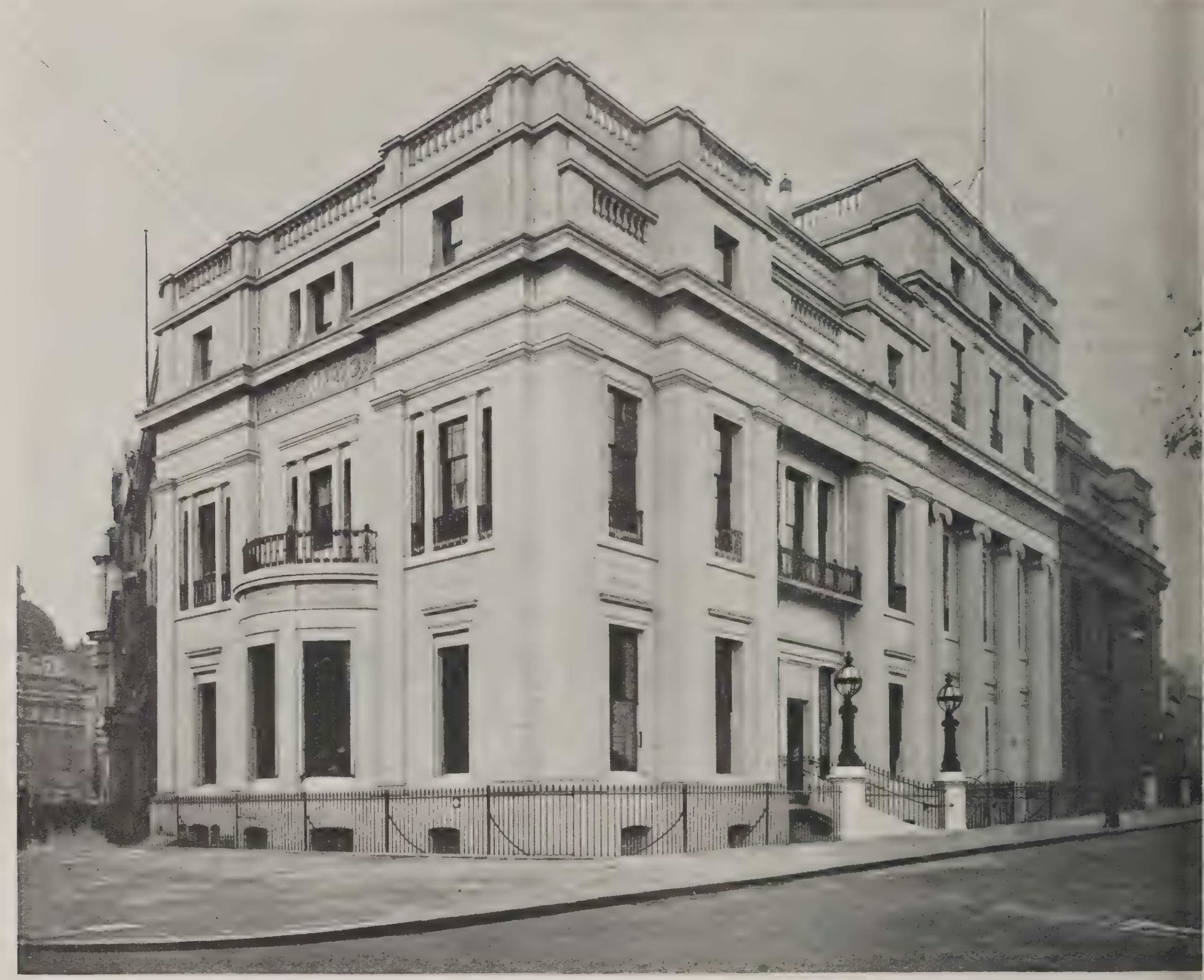
FOUR out of our seven plates this week deal with current architecture, in progress or completed. We give first place to Messrs. Richardson and Gill's perspective drawing for

Moorgate Hall, Finsbury Pavement, London, E.C. The view is that of an office building now in course of erection on a site 220 ft. long by 60 ft. deep. The shops are intended for the reinstatement of old tenants, the whole of the floors above the ground floor being treated as large areas for subdivision. A feature of the building when complete will be the flat roof and attic storey, which is set back on either side of the centre portion of the façade. Messrs. Chessum and Sons, of South Place, Finsbury Circus, are the contractors.

St. Anselm's Vicarage, Kennington, London, S.E. Adshead and Ramsey, Architects. This building forms part of a scheme which embraces the new Church of St. Anselm, of which the foundation stone is to be laid on June 13 next. The design is characteristic of Messrs. Adshead and Ramsey's work, being made up of quite a few elemental parts, so disposed that all feeling of baldness is avoided. The elevation is carried out with carefully selected London stocks, with dressings of Portland stone. Messrs. Holliday and Greenwood were the contractors.

Belfast Art Gallery and Museum Competition: First Premiated Design. James Cumming Wynnes, Architect. A description of this building will be found in Mr. Francis Ward's article on p. 376.

We publish in this issue the first portion of a critical article by Mr. A. Trystan Edwards on the work of Sir

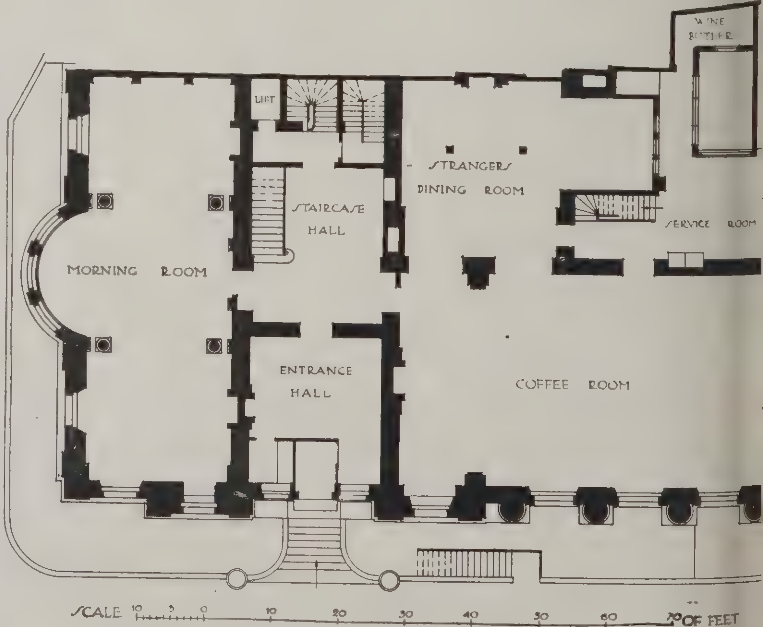


THE UNION CLUB, TRAFALGAR SQUARE, LONDON. SIR ROBERT SMIRKE, R.A., ARCHITECT.

Robert Smirke, and in connection therewith we give as our example of monumental architecture a plate showing his greatest achievement: *The British Museum.* The work requires no description. At the present time it is of topical interest in view of Dr. Burnet's recently completed additions to the Museum.

Stage 7 of our *Chart of Town Planning Procedure for Local Authorities' Schemes* comes next, and our series of Small Houses of the Late Georgian Period is continued with a *House at Cobham, Surrey.* Dignified, and composed of the simplest elements, this house, with its bright pantiled roof and mellow red brickwork, is a good example of what a small country house, making no pretensions to vie with its more important neighbours, should be. The blank space over the entrance door from which the window has been omitted, probably to avoid the window base, would be better if filled in.

Our Working Drawing shows the Front and Rear Elevations of *The Royal Automobile Club, Pall Mall, London. Mewès and Davis and E. Keynes Purchase, Architects.* This building, on the site of the old War Office, faces north and south, with its two longer sides having frontages to Pall Mall and Carlton Gardens. Both elevations are faced with Portland stone, and the attic storey, set back behind the line of the parapet, is roofed with green Westmorl slates with copper dressings. The sculpture on pediment of the Pall Mall elevation represents Scie as an inspiration of the automobile industry. Exte and interior views of the building were given at time of its completion.



THE UNION CLUB, LONDON: GROUND-FLOOR PLAN.

CORRESPONDENCE.

ditors disclaim all responsibility for the statements made or opinions ed by correspondents, who are asked to be brief, and to write on one side only of the paper.

Licentiates and the Proposed Charter.

he Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

RS,—I am a member (?) of the Royal Institute—centiate—and, if I might be permitted, would ask advice and sympathy in the troubles which have aken me since I became elevated to that dizzy ence, and in particular as to my position in view e new Charter.

roughout the discussion relating thereto I am to blush time and again for my sins—my utter rthiness and presumption in being so dis- ished are ever before me—and to wonder why a worm as I should be permitted to exist, not to of being some kind of a member of so august a . Will you kindly explain what sort of a mem- am, and what I shall be hereafter?

e position is to me obscure, for as you will know, ongst the other thousands was invited (I might rged) to lend a hand in furthering the interests e Profession (or was it the Institute, I forget h) and incidentally my own, to which end a ription was required amongst other things, but ing was said about the pin-pricks, not to say ts, which would follow as part of the bargain. I eciate that the greatness which was then thrust me must of necessity carry its responsibilities cares, but I never anticipated that they could be tterly nerve-racking and soul-destroying; dis- ion at such a price is too dearly purchased, and ing is left for me but to return to my former aratively happy if undistinguished obscurity and ed the glory of the "Licentiate R.I.B.A." Perhaps ght even find some body of fellow-workers who d receive me, even such as I, and permit me to some particle of my self-respect?

seems to me, Messieurs the Editors, and I ask your athy, that under the new Charter I should not e, but remain a marked man, "Registered, but not tered" being the sign of my inferiority—not Pure but—well, say, Rather Base.

vonder if the promise of this effulgent glory ting them will fire the imagination of my fellow s, and the other host not yet of the Elect, who outside the pale but whose assistance seems to rgently needed to establish the Dignity of the ession?

THE WORM THAT TURNED.

/e must confess to some hesitation as to the strict riety of inserting this exercise in humorous exag- ion. In printing it for what it may happen to be as an indication of opinion on a matter which ot be too seriously handled, we must emphasise disclaimer at the head of this column.—EDS. A. B.J.]

Architecture at the Royal Academy.

he Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

RS,—Not all your readers can be expected to rse the views of Professor Reilly on "Archi- re at the R.A." or to agree entirely with him in his ents on the exhibits. For while condemning the demic manner" in painting he advocates it in itecture, and he appears to think he is doing other-

s it not been the slavish and laborious striving after detail and definition and the adherence to precedent, to the neglect of greater things (such as focussing and total effect, the quality of light glinting on, modelling and transforming the local colour of things), and the failure to grasp the relative tones and values—which have been the bane of most British painting, and which led to Mr. George Moore's stricture and to the general contempt for the academic manner? And if "East is East and West is West," as Professor Reilly says—then let Greek be Greek and let British Architecture, even if it borrows Classic features, at least have some show of native feeling and some breath of life. Pure and fine as Greek is, surely it is not to be the Style of Eternity! And would it not be a good thing for British Architecture if we had more men delighting in and producing "crude things" as Mr. Lutyens does?

In reference to the Perspectives—their object is surely but to convey some general idea of mass, grouping, and points of light and shade, with some sense of actuality (at least that is all we should expect in cases like the Delhi buildings), and we ought no more to expect them at the same time also to give us full details, than we should expect them unnecessarily from a painter, or than we should to hear every instrument in an orchestra playing a solo. The good architect is a conductor. When we require details we should turn to the scale drawings and let the draughtsman play his solo there.

The Academy is much more alive than it was, but that is due to its being less concerned with details and tradition, and more so with problems of light.

May not the unpopularity of the Architectural Room be attributed to its lifeless tinted line perspectives, and perhaps also in some measure to the monotonous framing (which might be substituted with *passe-partout* mounts and suitable frames if the hide-bound conditions would allow)? And would it not be a good thing if finished buildings were illustrated by plans and photographs (as mentioned by "Ubique" a short time ago) and projected ones by still more realistic perspectives?

We cannot see mass and detail at the same time, and no one would expect to see the Delhi buildings drawn to the same scale as Professor Beresford Pite's Insurance Offices.

ALWYN H. HOLLAND, Licentiate R.I.B.A.

[Mr. Holland makes the initial mis ake that the Royal Academy is, in any sense of the word, Academic in the methods of work it fosters. Would to heaven it were! The pretty pictures it exhibits year by year have far less connection with the tradition of the great masters than the work of the boldest post-impressionists.—C. H. R.]

Vancouver and King's Lynn.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—A subscription has been set on foot at King's Lynn to place a portrait of Vancouver in the Town Hall.

The cottage where Vancouver was born still exists in the Quakers' Meeting House Yard. It is a half-timbered tiled house with a mansard roof.

Vancouver was baptised in St. Margaret's Church at King's Lynn (as recorded in the register) on March 16, 1761, but he was buried at Petersham.

If any architect visits King's Lynn this summer I shall be very pleased to show him not only Vancouver's cottage, but several other interesting houses, and also the churches, ancient gateways, and relics of the old monasteries which exist in the town.

King's Lynn. J. H. KERNER-GREENWOOD.

THE ANGLO-FRENCH EXHIBITION OF ARCHITECTURE, AND A VISIT TO VERSAILLES.

Owing to the visit to Paris of the King of Denmark, Monsieur Poincaré was compelled, at the eleventh hour, to cancel his engagement to open the above exhibition. In the unavoidable absence of the President of the French Republic, the exhibition, which consists of a large number of representative drawings and photographs, well arranged in the gallery of the Jeu de Paume, was formally opened by M. Jacquier, Under-Secretary of State for Fine Arts, on Friday, the 15th inst. Primarily intended to promote closer relationship between British architects and their French confrères, the movement that has now so successfully been inaugurated is the result of protracted negotiations between the Architectural Association and the Société des Architectes diplômés par le Gouvernement. And there is already abundant evidence that the proposal for the periodical interchange of national views on art—an exhibition on similar lines may be held in London in three years' time—is being cordially welcomed by all sections of the French community. For example, the Parisian journal *La Presse* regards the Anglo-French exhibition as " une nouvelle manifestation de l'entente cordiale qui aura l'influence la plus efficace sur la connaissance réciproque des sentiments et des aptitudes artistiques des deux pays." But apart from this aspect of the results likely to follow, there is no doubt that the exhibition is one of great educational value. For by carefully studying the historical section of the exhibits now on view it will be quite possible for the French student to obtain a really comprehensive grasp of the development of British architecture during the past half-century. And the modern section in which the tendencies of our architecture of to-day are fully illustrated is equally instructive. In addition, numerous drawings by British students, selected for comparison with similar works contributed by pupils of the Ecole des Beaux-Arts, have been sent from the Royal Academy, the Architectural Association, University College, and the first Atelier in London, and from the large provincial schools of architecture at Edinburgh, Liverpool, and Glasgow.

An attractive programme of visits and entertainments following the inauguration of the exhibition was arranged by the joint committee of the Royal Institute of British Architects and the Architectural Association, acting in conjunction with the Société des Architectes.

Leaving Charing Cross early on Friday morning, the 15th inst., many of the English visitors to the exhibition were able to attend the banquet given in the evening in the Salon du Palais d'Orsay by the Société des Architectes, at which M. René Viviani, Minister of Public Instruction and Fine Arts, presided. M. Viviani was supported by the representative of the President of the Republic (Colonel Aubert); the American Ambassador (Mr. Herrick); the President of the Société des Architectes (M. Jacques Hermant), and by several delegates of the R.I.B.A. and the Architectural Association, including Mr. Reginald Blomfield, Mr. Ernest Newton, Mr. Gerald Horsley, and Mr. Curtis Green. During the course of the proceedings M. Viviani stated that after the expiration of a few days it would be officially announced that all students of the Ecole des Beaux-Arts and of the provincial schools of architecture who have satisfied the conditions imposed by Articles 59 to 65 of the Regulations of the Ecole will henceforth take the title "Architectes Diplômés par le Gouvernement." Mr. Reginald Blomfield thanked the members of the Société for the splendid manner in which they had co-operated with the English Committee, and Mr. Herrick expressed the hope that at no distant date an exhibition of a similar kind would be held in America. Prior to the close of the proceeding Mr. Blomfield was decorated with the Order of Officier d'Instruction Publique, and Mr. Curtis Green, President of the Architectural Association, Mr. M. H. P. Cart de Lafontaine, Hon. Secretary of the Paris Exhibition Committee, and Mr. Gerald Horsley became Officiers d'Académie. A very enjoyable evening was brought to a close with an instrumental concert in the course of which Glück's Marche Religieuse d'Alceste, the Gavotte d'Armide, by the same composer, and Debussy's Petite Suite were ably rendered under the direction of M. Henri Welsch.

On the following day, a numerous company of French and English architects visited the palace of Versailles, guided by M. P. de Nolhac, than whom no one is better qualified to speak on the many stirring historical events of which this huge structure has been the scene. Now associated for all time with the memory of Louis XIV., the true founder of the palace of Versailles was that monarch's father and predecessor, Louis XIII. For it was the latter king who, in or about the year 1624, erected a small square-shaped hunting box, faced externally with red bricks and stone, some portions of which are still to be traced in the marble court of the present building. Louis XIV.'s connection with Versailles commenced in 1662, when he inaugurated his famous series of fêtes and open-air entertainments at which Molière and his company of players were so frequently called upon to assist. But it was not until the year 1668 that, actuated by motives of domestic policy, the king began those gigantic additions to his father's château by means of which the building became, in 1682, not only an imposing seat of government, but also a permanent place of residence for his entire court. Under the king's first architect, Louis Levau, two east wings were added to the small château, whilst J. H. Mansart, who was placed in charge of the work after Levau's death in 1670, enlarged the two wings erected by his predecessor, constructed the Galerie des Glaces in 1679, and subsequently built the long south wing. The long north wing was a still later addition made by Mansart in 1684-1688. Thus extended, the palace is said to have contained room for 10,000 persons. Mansart supplied the design for the well-known Chapel of Versailles, which was erected by his successor, Robert de Cotte, between the years 1699 and 1710. As originally constructed, the roof of this beautiful building was surmounted by a gilded turret. The pavilions on each side of the Cour Royale are both later additions, that to the north being added by Gabriel in the reign of Louis XV., and that to the south by Dufour in the time of Louis XVIII. In 1753 Gabriel commenced the theatre, afterwards known as the Salle du Senat, but the structure was not completed until about 1770. The best view of the beautiful gardens of Versailles is obtained from the terrace in front of the palace. At the foot of the stairs are the garden and basin of Latona, and beyond the lawn, the Apollo basin, and the Grand Court combine to produce a charming vista. To the left are the South Garden, the Orangery and the Swiss basin, and to the right the North Garden, the Marmoset walk, the Dragon basin, and the Basin of Neptune. The princ approach to the Trianons, which adjoin park of Versailles on the north, is by stately Avenue de Trianon. Of the buildings the larger, known as the Gr Trianon, is a marble structure with a roof erected by Louis XIV. in 168 after designs supplied by Mansart. interior is profusely adorned with paint by Boucher, Le Brun, Coypel, Mign and other artists. North-east of the Gr Trianon stands the beautifully proportic Petit Trianon erected by Louis XV. in 1 and one of the very best example Gabriel's powers of design. This s villa became in later times a favou resort of the ill-fated queen M Antoinette, to whom it was presente Louis XVI. The gardens are enriche a charming domed structure, built or islet in one of the streams that mea through the grounds and are known as Temple of Love. A visit to the minia theatre in which Marie-Antoinette accustomed to perform in comedy opera formed a fitting termination thoroughly enjoyable day.

A. W. S. Cros

[A critical article on the exhibition Mr. Cross, will appear in our next issu

SOCIETIES AND INSTITUTIC

ARCHITECTURAL ASSOCIATIO

Country Membership Section.

The Association announce that they created a Country Membership Sectio the benefit of those who are preclude distance from London from taking advantage of the privileges offered by o ary membership. The subscription is nominal one of 7s. 6d. per annum. such members the " Architectural Ass tion Journal " will be forwarded mon and the Employment Register (both those seeking employment and for a tects requiring assistance) will be at disposal. Books from the library wi forwarded to country members, who be expected to bear the cost of carri Slides and films may be borrowed on sp terms. When in London, country m bers will have full use of the Associa premises, library, members' room, mon room, dark room, etc., and the School is open to them. Full informa as to the privileges offered to country m bers by the Association, and applica forms, may be obtained from the Secre 18, Tufton Street, Westminster.

LEICESTER SOCIETY OF ARCHITECTS.

Annual Meeting.

The annual meeting of this society held at the Permanent Library, Gr Street, on Friday, May 8. The ret president, Mr. A. H. Hind, F.R.I.B.A. ceived a hearty vote of thanks for his vices, and Mr. Charles Kemp A.R.I.B.A., was elected president for coming year. The following gentle were elected as the Council: Messrs. A Hind (ex-president), W. M. Cowdell, T. Grewcock, H. H. Thomson, S. P. F. Morley, and N. B. Robertson. Mr B. Cooper, A.R.I.B.A., was re-el honorary treasurer, and Mr. Cle Stretton, A.R.I.B.A., re-elected hono secretary. The Council reported that membership roll contained 110 mem and nine additional members were el at the meeting.

BEAUTIFUL LONDON.*

T. RAFFLES DAVISON, HON.A.R.I.B.A.

his introductory remarks, Mr. Davi-
dwelt on the aims of the London
y. It is, of course, unnecessary, he
o make out a case for the necessity of
ng and and maintaining and con-
y developing London as a great and
iful city, but as to how it is to be done
atter of very great moment indeed.
are three dominant considerations
affect the result: (1) The control;
e cost; (3) the incentives. Now
re three points to consider, and we
f you please, leave out the two first
ome to the last, for the London
y does not aim either to exercise the
l or to find the money. It does, how-
aim to do something very definite
the third of these points. It would,
sume, like to make and keep every-
very uncomfortable about the future
ndon until it has a very much
er outlook than at present. It
try to keep us from a sleepy satisfac-
ith all the good things we at present
s, and to fill us with a divine discon-
ll the outlook is better.

ides this, it is hoped to stimulate the
s and ambitions of the whole body of
n citizens for the most perfect de-
ment of the city.

se ends can only be attained by a
nd real combination of the best
ht and effort amongst every class of
mmunity. The last thing desired is
ke it a society of architects, en-
s, surveyors, or of any one prepon-
ng class. The worst that could be-
would be that it should become
al or factious in any sense. The
member of such a society would
ps find a suitable political creed in
f a very rabid Radical Conservative.

Control.

more one considers the many sub-
in detail which affect the general
ity of London, the more one realises
general and supreme authoritative
l is of vital importance. We have
it argued that London is rich enough
ry its own burdens. This some of
nnot subscribe to. We think that
a city as London ought to receive
ubstantial contributions from the Im-
Exchequer to do things which the
urdened ratepayer ought not to be
with. The value of Government in-
can surely be partly gauged from
arge values which accrue to great
ess concerns by the possession of fine
ngs.

of the permanent factors in the good
nment of London would appear to
at every citizen should be made to
in its burdens and responsibilities in
and equal proportion, such as the
ation of rates would tend to bring
. The application of the betterment
ple is supposed to apply in a strictly
d way, but the effects of betterment
ry far-reaching, and every citizen of
n is affected, directly or indirectly,
e river embankments, boulevards,
spaces, beautiful parks, and fine
ngs. This may appear to be a sort
ism as to which we need no re-
r, but architects, as well as other
, are liable to overlook the larger
ts of city growth and the way in
they affect the well-being of the in-
al.

Oversight and Design.

We should distinguish between the *government* of London and the *control* of its growth. A good system of government is not of itself enough, and that is one of the points which I take it the London Society is concerned about. You may have a very good system of government, and it may be adequately carried out without having any adequate oversight as to the city's growth. What is emphatically wanted is a continuous and insistent consideration of the problem involved in securing the best ideals of development. One thing at least is certain. The kind of control which shall be really statesmanlike and of the highest value must either be paid for at a very high figure or be obtained for nothing, and probably the latter is the best. In such work there is a call for a power of detachment, for high enthusiasm and for judicial balance from access to which the chains of officialism for ever keep us back.

Forethought.

The gravest indictment we have to bring against London is lack of foresight. You cannot deal with traffic or housing problems unless you consider also the general amenity of the city, and you cannot come to conclusions as to the best sites for certain buildings unless you have an idea on the future development of the city. We have been told that the General Post Office need not have been planted down in the heart of the city, with its many hundreds of clerks, and that it would have been better farther out. If this had been thought of and settled long ago it might have been largely to the public benefit, and also to the large army of workers involved. We have been informed that the Post Office authorities are to girdle the city with an underground tube which will make future underground railway development difficult. I do not state this as a fact, but it shows how largely one problem affects another, and that only by some far-seeing and statesmanlike control over all can every interest be kept in its right place and its due proportion.

My contention is that at present the prosecution of private business enterprise is transforming London at an alarming rate, and in a wholly haphazard way.

It is very easy for us to realise the folly of our forbears, for we see now clearly enough they threw away one magnificent chance after another. But we are doing the same thing ourselves. Because great improvements are very costly we keep them over till they become more costly or impossible. The only adequate legislation for London now is that which takes account of the progress which will be seen in fifty years to come, when the population and the area will have more than doubled, wealth enormously increased, and our present mean consideration of public improvements will be an impossible one.

The Railway Problem.

Mr. Paul Waterhouse has dealt with railway stations in his own graphic and interesting way, and with all his kindness and tact he could not manage to make out a very good case for them. It is very certain that the forecourts and general aspect of Cannon Street, Charing Cross, London Bridge, and King's Cross do not add much to the joys and amenities of existence. They appear to get every shilling's worth of revenue out of their approaches and forecourts. It needs little imagination to see that the fine open space about the front of King's Cross Station might have been dealt with in such a way as to have added to the value of all the property looking on to it and reflected some little credit on the railway company, though perhaps not the credit which would be accepted by a bank. Could not the railway problem of London be faced and some study be bestowed on the relations of their future development with the general welfare of the public and the aspect and amenities of the city?

The way to anything like great and drastic improvement of London, more especially with regard to the south side of the river, is blocked at the very outset by the condition of the railways. Is it not pertinent to press home the enquiry as to how long these obstacles to improvement are to endure?

Trafalgar Square.

Our attention is periodically called to the beauty of Trafalgar Square. In truth it has possibilities and some qualities even now. But it will never be a fine square so long as the Nelson Column remains—one of the most ridiculous monuments and effigies which have ever memorialised a national hero. We can never give Trafalgar Square a scale which will hold such a thing. Then the commanding site and dignified mass of the National Gallery is dominated by one of the most absurd pepper-box domes in London. When you look at the south side of the square everything is hopeless, though it might have been saved by a fine entrance to the Mall and a fine widening out of the Whitehall thoroughfare. The east and west sides of the square are not parallel, and the buildings which face them are only so good that they might be worse. Many suggestions have been made for the improvement of Trafalgar Square. The most essential thing of all is that the buildings which flank it to the east and west shall be of a decently dignified character, and so designed as to give balance to the square. The unhappy fountains, raking wall, and the general lay-out, ought to be improved. A central flight of steps up to the National Gallery might well replace the angle stairs.

The Mall Approach and King Edward Memorial.

The site for the King Edward Memorial has been the subject of much discussion, and the fact that this discussion has been re-opened in a most energetic way within the last two months shows how great is the dissatisfaction as to the site in Waterloo Place. The Memorial Committee have had a very difficult task, and they individually command the highest respect. But since their consideration of the matter a different state of affairs has arisen as to the opening out of the Mall Approach.

Here is a great processional road leading from the City to the Palace. Before the Palace stands the memorial to the greatest queen who ever lived—and the processional road, the Victoria Memorial, and the newly fronted palace, form a memento of the whole Victorian Era. The late King Edward carried the burden of Royalty through many years of that era. Such a King surely deserves to have a prominent place in our great memorials, and the most appropriate place would surely be as a frontispiece to the whole—at that point where the Mall entrance links the Palace with the City.

Surroundings of Saint Paul's.

The lecturer then explained, and illustrated with plans, his idea for improving the surroundings of St. Paul's. The widening of Newgate Street and the churchyard, and a new road from the west front of the Cathedral towards Smithfield, were integral parts of his scheme. As re-

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stance of a Paper read before the R.I.B.A. on
y, May 18.

gards London Bridge, the northern approach to London Bridge from King William's statue offered one of the finest chances we had had for generations. All the property on either side was coming in for rebuilding, and a fine scheme for a dignified architectural treatment was obviously called for. One would have thought some City Companies might have united to take over the old Pearl Assurance buildings and erect a fine building such as would balance the dignified block of the Fishmongers' Hall on the western side. Instead of that, this incomparable site had been sold by auction, and it would probably be made a business success by building it well up into the sky and nearly shutting out from view the church of St. Philip Magnus and Wren's fine Monument.

The problem, he said, of the river, its traffic, its bridges, and its banks is a great one, and it will never be properly solved in the piecemeal way we do it. London Bridge has been widened and spoilt. Waterloo Bridge is too narrow and in a bad structural state. Blackfriars Bridge is spoilt by the railway bridge alongside it. We need a new road bridge at Charing Cross. We are improving Southwark Bridge—it is said unnecessarily. We are projecting a new St. Paul's Bridge before any related scheme of better town planning is devised in regard to it. A new Lambeth Bridge is proposed, and amongst the lot of them there is not one with covered footways.

Under an appalling cloud of practical difficulties and necessities the idealist must find his way onward. Traffic, housing, building laws, sanitation, light and air, illumination, better town planning, the long inheritance of past abuses and mistakes, rates and loans, Government, and, worst of all, politics confront his path at every turn. How shall he make headway against it all?

The work is so great, so complicated, and so costly that nothing short of a continuous and vigilant oversight by somebody which will represent the most enlightened opinion of the day seems likely to cope with the problem. Intellectually and socially such work provides a good interest on the outlay involved. The variety of problems to be solved and the conflict of ideas as to their solution brings us into contact with each other in a way which cannot fail to be beneficial all round.

You cannot study properly such a problem as that of the south side of the Thames unless you call in the advice of experts of many kinds. River traffic and tides, bridge design and mud deposits, railway interests and the trend of commerce, town planning with all its difficulties, the principle of betterment and its application, the general design of an embankment, the question of high and low level roads, the better union of north and south sides of the City—these and numberless other things present a problem almost as difficult as that of perpetual motion.

Discussion.

Mr. Carmichael Thomas, Chairman of the Executive Committee of the London Society, proposed a vote of thanks to Mr. Raffles Davison, whose paper, he said, was really full of interesting ideas. He thought, however, that they should go carefully; sometimes the ideals of architects were a little too high. Trafalgar Square, for instance, could certainly be altered; but he doubted whether it would be advisable to touch the national hero and his ugly column.

Mr. Granville-Smith, Mayor of Westminster, seconded the vote of thanks, and, referring to Mr. Raffles Davison's criticism of the buildings on the east and west sides of Trafalgar Square (Morley's Hotel and the Union Club), said that these were the only redeeming points of the square. Why did not the lecturer bring his guns to bear on the Royal Hotel?

Sir John Benn having protested against "loading up the tombstones of the past with the responsibility for the blunders of our own day and generation,"

Sir Aston Webb said he was a little disappointed that Mr. Raffles Davison did not show covered ways to his proposed new bridge across the Thames at Charing Cross. Bridges, he thought, should be covered. It was brutal to expect people to cross uncovered bridges on a pouring wet day. Southwark, St. Paul's, and Lambeth Bridges were all about to be built, and if we did not get the protection on those bridges we should never get it at all. Sir Aston concluded with a reference to the present-day demand for continuous shop fronts of plate-glass, showing, on the evidence of Mr. Selfridge (who said that a good architectural front was of immense advantage to the goods displayed in the shops) that the demand was not upheld in the highest quarters.

Mr. Lionel Thomson having offered one or two practical criticisms,

Sir Laurence Gomme said that other big cities would not tolerate the little excrescences which served for pavements in Bond Street and Baker Street to-day. If landlords would only combine and say "What is good for London is good for us," matters would speedily improve.

Mr. H. G. Ibberson said that, in addition to the difficulty of converting the established authorities, there was the difficulty of creating a race of architects with a sense of style. Unless we could get a better spirit among architects, no amount of town-planning would make a city beautiful. It was sad, in the case of Regent Street, that Nash's general lines had been destroyed, but what was even sadder was that the new buildings had no individual sense of beauty. Even if they formed part of a general scheme they would not be satisfactory.

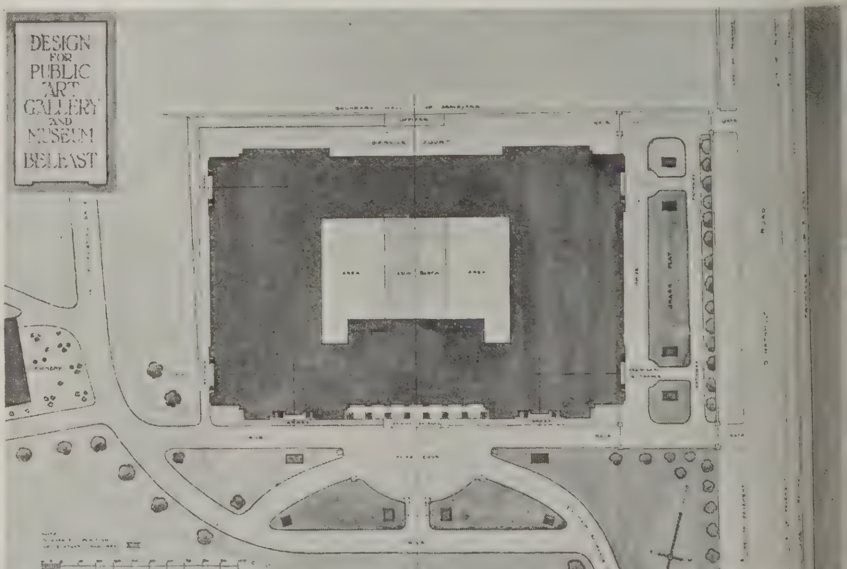
BELFAST PUBLIC ART GALL
AND MUSEUM COMPETITIO

From inspection of the sixty-nine se designs sent in, which are at presen exhibition in the Ulster Minor Hall, fast, one cannot help but notice the in the minds of competitors as to wh the entrance from the Stranmillis Roa the west side, or that on the north fa the Botanic Gardens, should be made chief one in planning and elevationa signing. In some cases the north elev and its entrance often appear almos significant, while internally are fou spacious hall and staircase.

Again, another notable feature is adoption in quite 70 per cent. of the petitors of severe Classic lines in Whether or not this is advisable for s site, situated as the buildings will be public park well wooded and isolated other buildings, and not in the centr the city, one is inclined to think that haps less severity might have been acceptable. In addition, it was req that the portion of the building adjoi the Stranmillis Road on the west wa have access separate and complete from entrance into the Botanic Gardens through which at certain times of the admission cannot be obtained.

In many designs the limits which placed on competitors have cert caused some confusion, seeing that only a portion of the completed scher to be executed, and that this, necessa had to be so arranged as to give the suitable accommodation for the pre time, although the entire completed sch was taken into consideration by assessor.

Design No. 68, that of Mr. J. Cum Wynnes, Licentiate R.I.B.A., of 9, W burn Terrace, Edinburgh, was selecte the assessor. Though not without faults, this complies in most respects the requirements laid down. The b ings, generally, are arranged arou spacious central lighting area, a which a low building on the ground museum floor runs north and south, taining refreshment room, etc., on ground floor, and the Belfast Room on museum floor, which in no way inter



BELFAST ART GALLERY AND MUSEUM COMPETITION: GENERAL PLAN OF FIRST-PREMIATED DESIGN. BY. J. CUMMING WYNNES, LICENTIATE R.I.B.A.

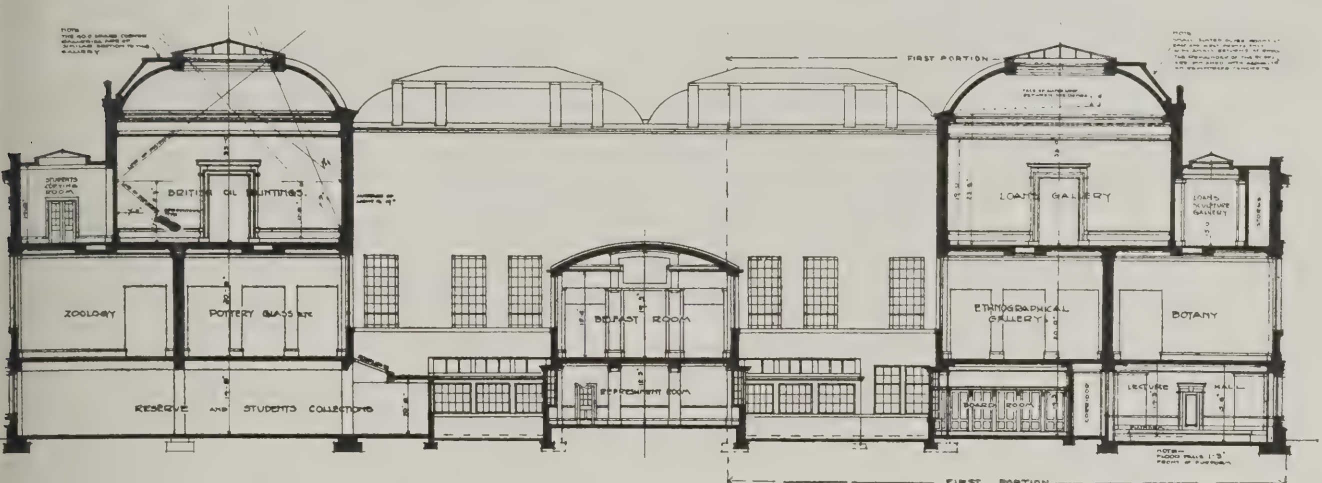
the lighting of the museum galleries, e windows face the central area.

e principal entrance from the Botanic ens, somewhat insignificant in ap- nce externally, leads into the main nce hall. A secondary entrance is ded on the northern end of the rn front, and leads into a minor hall a staircase rising out of it. It gives s to that portion of the buildings h is to be erected immediately. On rst floor the various galleries are well d and of good proportions, whilst on loor above the same remarks also . The heating premises are well apart from the main building—in the basement.

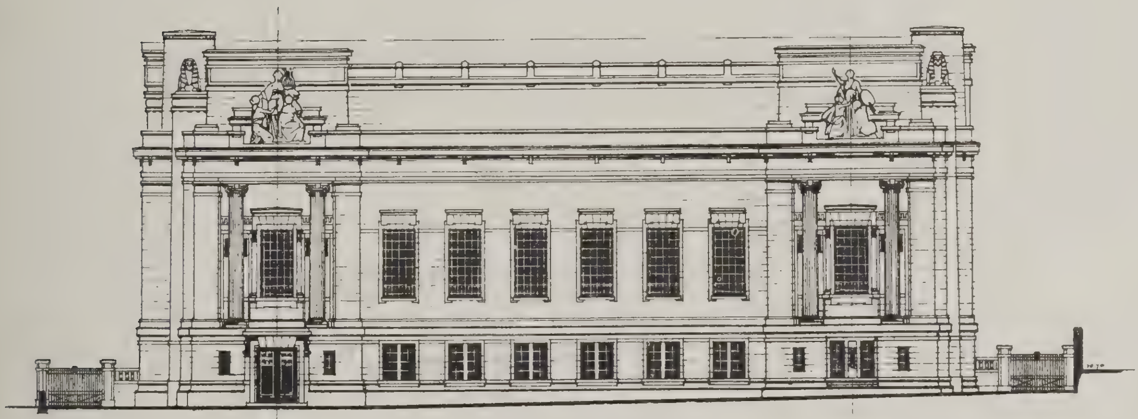
The lecture theatre appears somewhat elongated in plan for satisfactory acoustic properties.

The external appearance of the building, in comparison with other designs submitted, is much less severe, and should lend itself well to the site, whilst its recessed front on the north elevation gives relief, but is somewhat marred by the main entrance, which appears insignificant, yet at the same time interferes with the colonnade. One fails to see how an important superstructure shown immediately over the museum library is to be carried, unless on beams.

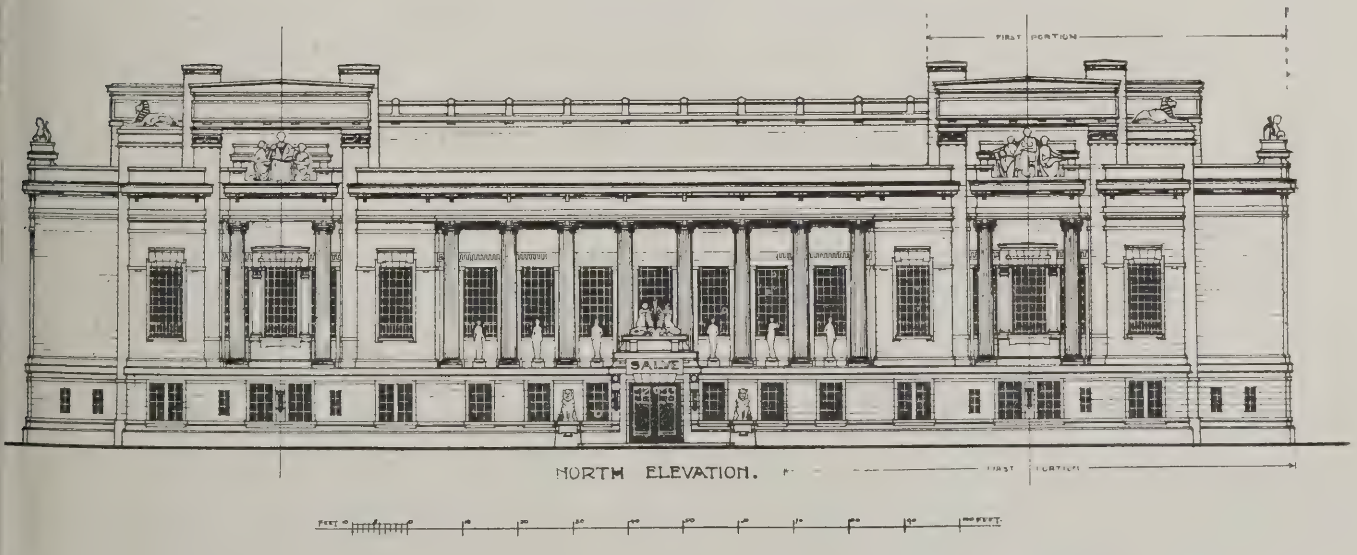
No. 50 (Mr. Richard M. M. Gunn, Craigmillar Road, Langside, Glasgow) has beeen awarded first premium. Generally speaking, the design has a good plan, having both entrances close to each other on the ground floor (with basement below), that on the west being the chief, with an impressive entrance in the centre of the façade, entailing both entrances and halls being built in the first section. Under the entrance hall in the basement is a lower hall, corresponding with that above. The latter



LONGITUDINAL SECTION LOOKING SOUTH.

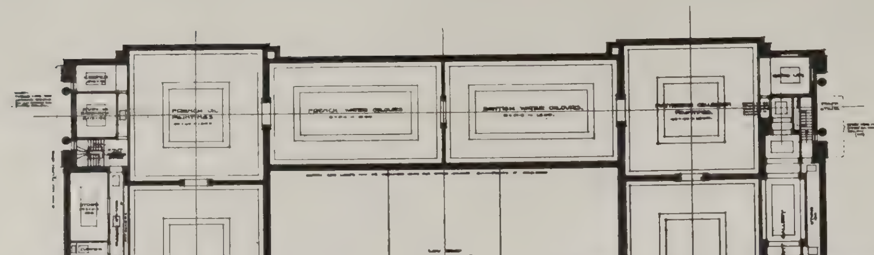


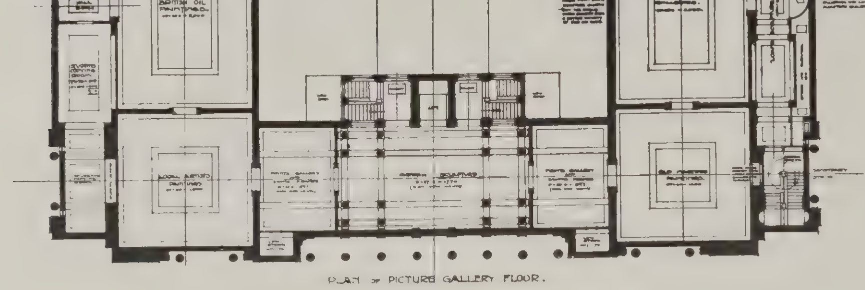
WEST ELEVATION



NORTH ELEVATION.

BELFAST ART GALLERY AND MUSEUM COMPETITION: FIRST-PREMIATED DESIGN.
BY J. CUMMING WYNNES, LICENTIATE R.I.B A.





BELFAST ART GALLERY AND MUSEUM COMPETITION: PLANS OF FIRST-PREMIATED DESIGN. BY J. CUMMING WYNNES, LICENTIATE R.I.B.A.

appears insufficiently lighted, and the position of the public lavatories and cloak rooms off it is not convenient to the main entrances, as required. Apparently there seems no method by which invalids in bath chairs can be admitted, as both entrances are approached by a series of steps, but the same defect applies to many other designs sent in. The various museum and picture galleries on ground and first floors are well arranged and lighted.

The external appearance of the building has a somewhat severe Classic treatment of design, but is good in proportions and expressive of the purpose for which the building is to be used.

No. 38 (Messrs. Wright and Wylie, 212, Bath Street, Glasgow) has been awarded second premium, and has entrances similarly arranged to those of the previous design, with large entrance hall on ground floor, out of which the children's room opens, and has to be passed through to approach the other galleries. A good perspective drawing shows a pleasing and suitable façade, with plainly treated corner-blocks of building connected by a semi-columnar façade under the same cornice. The total cost of erection would not exceed the amount allowed, though possibly the first section might do so slightly.

No. 61 (Messrs. Tate, Savage and Lawson, 98, Esmond Road, Bedford Park, London) has been awarded the third premium. In this the main entrance and staircase are in the centre of the north front and accessible from the ground floor level, whilst the secondary entrance is from the Stranmillis Road at the basement level. The plans appear well arranged, although on the basement perhaps some portions are insufficiently lighted. The portion intended for immediate erection is the complete façade facing north into the park, which indicates a severe unbroken evelation in plan and skyline. It is very questionable if the portion to be first erected could be executed at the cost stipulated.

No. 54 (Sir T. Manley Deane, B.A., R.H.A., 27, Molesworth Street, Dublin) consists of designs for a rather impressive block of buildings which perhaps might appear too palatial and lofty if placed on a site such as that in Stranmillis Road.

The secondary entrance, and offices adjoining, are well placed, though rather much is made of this elevation, which should be subsidiary.

No. 27 (Messrs. G. and A. Lodge) is a very clear and workable design. The galleries are arranged around a large central

area, which contains an octagonal ce
building as a statuary hall, below w
in the basement, is space for spir
wheels and looms, lighted through a
in the floor of the entrance hall. This
tral octagonal building would u
tunately affect the lighting of the
building surrounding it. Central
trances are from Stranmillis Road
park fronts, both being contained i
first portion erected. The external
tions are dignified, and designed wit
full appreciation of what a building o
class should be.

No. 2 (S. B. Russell, F.R.I.B.A.
Gray's Inn Square, London) compri
good design and plans, but the base
would be somewhat badly lighted,
seems not to be taken full advanta
as valuable space.

No. 29 (Messrs. Tulloch and Fitzsi
FF.R.I.B.A., Belfast) adopts the Bo
Gardens frontage as the chief entr
with that on the Stranmillis Roa
secondary. The scheme throughou
been well thought out, and the ge
arrangement of galleries and mus
fulfils the requirements as regards lig
circulation, and present accommodati

No 55: Mr. J. B. Fulton, A.R.I.
London, submitted a very clever sch
well drawn, with fine perspective;
chief feature being a large central hall
staircases, galleries, and lecture th
conveniently grouped around same.
principal elevations are picturesque
dignified—eminently suitable for a
gallery, with true artistic feeling a
good proportion. Unfortunately,
apsidal end of the building exceed
limit of the site.

No. 33, Messrs. Clifford and Lu
Glasgow, have shown the Statuary
approached from the front façade
narrow corridor. The secondary ent
hall on the west side is perhaps
spacious in contrast to the main entr
but this defect is overcome somewh
the way in which the secondary ent
lends itself in grouping conjointly wit
statuary hall so as to form one com
scheme. The draughtsmanship in
set is very good, the perspective view
particularly excellent.

No. 5: Mr. Waldo E. Guy, Sunder
sends an exceedingly well-executed
drawings, and in the pencil perspect
depicted a building which has origi
and repose suitable for a situation su
this, of an ideal art gallery in a public
It is doubtful if the lighting from the
tral area would be adequate, owing t
buildings placed in it causing obstru
by trying to get too much out of the s

No. 13: Messrs. Young and East,
don. The principal entrance of this d
faces north, and is recessed in the c
with wings projecting on each side.
enables the light to be obtained fro
outside walls, but rather hampers th
ternal arrangements of the rooms and
leries for the circulation of the public.
ternally the design is very pleasing,
strong shadows breaking up the long
age to Botanic Gardens Park, caus
the arrangement of the plan.

No. 1: Messrs. Orpen and Dicke
Dublin, submit a very well drawn
designs, showing in perspective and
tions a quite distinctive and impre
treatment for a building such as a
gallery.

It is impossible to mention many
designs which deserve notice, but in
instances fine ideas are in themselve
presented, which would be totally u
able for an elevated site such as th
in the Botanic Gardens Park Belfast

Francis Wa

MODEL ANSWERS TO R.I.B.A. EXAMINATION QUESTIONS.

BY WILLIAM FRISKIN, A.R.I.B.A., ASHPITEL PRIZEMAN, 1913.

publish below the fourth of a series of Model Answers to Questions set for the Final Examination of the Royal Institute of British Architects, held last November.

ENE, INCLUDING DRAINAGE, VENTILATION, HEATING, LIGHTING, AND WATER SUPPLY.

ion 1.—The plan accompanying this aper shows the sanitary wing of a lock of City offices.

Draw on the plan the scheme of rainage you would adopt. Describe he pipes, state sizes, materials, and alls, and show all the requisite pipes 1 elevation and section, with enlarged ketch section through manhole earest sewer.

swer.—See diagram.

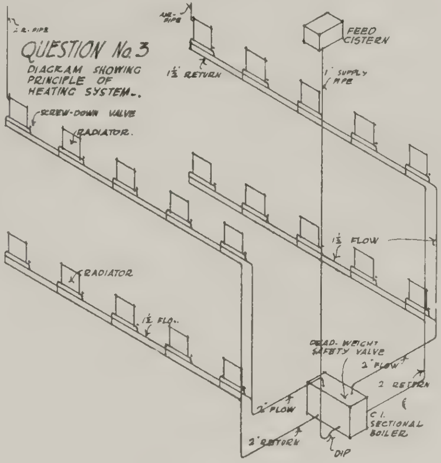
e drains outside the building to be d stoneware socketed pipes, jointed rtland cement.

e drains under the building to be iron socketed and caulked. Iron pipes oated with Dr. Angus Smith's solu

· 4-in. pipes fall to be 1 in 40.
· 6-in. pipes fall to be 1 in 60.

ion 2.—What are the regulations, in he local by-laws you are acquainted vith, as to construction, light, and entilation of w.c.'s and as to the entilation of drains and termination f ventilation pipes?

swer.—By-laws contain the following sion: In every w.c. there must be a

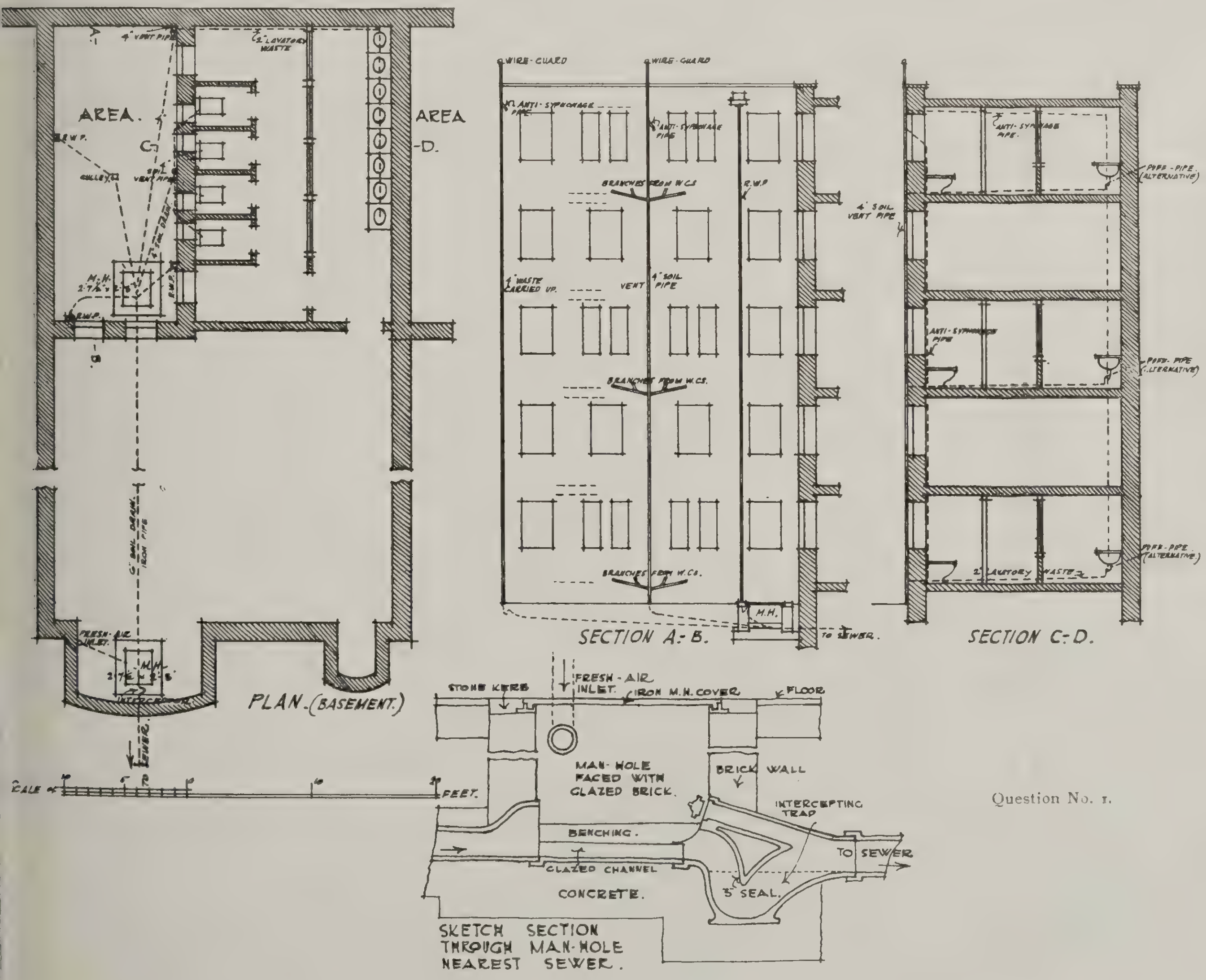


window, minimum size 2 square feet, opening directly into the external air and, in addition, an air-brick. No w.c. may be approached directly from any habitable room. If more than one w.c. be connected to any soil pipe, the traps of such w.c.'s shall have anti-syphonage pipes (not less than 2 in. internal diameter) carried up above the top w.c. and there connected to the soil vent pipe. Drainage systems are ventilated by fresh-air inlets and ventilation pipes. A fresh-air inlet, fitted with mica flap-valve, is introduced at the lower end of the system, into the man-hole immediately above the intercepting trap. At the highest point of the drain, or at the higher end of a branch system, the soil pipe is carried up, undiminished in diameter, as a ventilation pipe, to a height of 3 ft. above the roof, or nearest window if less than 20 ft. distant. It is usually fitted at the top with a galvanised-iron wire guard.

Question 3.—A heating apparatus with 20 radiators is required for a country house on two floors. Give a diagram showing boiler feed cistern and arrangement of pipes to serve the radiators. Specify the test you would require the apparatus to stand and the temperature you think should be maintained in the reception and bedrooms when the external temperature is 32° Fahr. Describe the boiler, and give description and sizes of pipes and state necessary precautions for use of apparatus.

Answer.—See diagram.

The apparatus will require to stand pressure up to 50 lb. per square inch.



Question No. 1.

Temperature in reception rooms and bedrooms 55° to 65° Fahr.

The boiler to be a cast-iron sectional boiler fitted with gun-metal dead-weight safety-valve and emptying cock, cast-iron flue-pipe with bend and cleaning door, also regulating damper.

Pipes up to 2 in. internal diameter will be wrought-iron, pipes over 2 in. internal diameter will be cast-iron.

Precautions for use of apparatus:

Use broken coke only.

Keep a clear fire burning, regulated so that no unnecessary draught is created. A fierce fire generates steam in the apparatus, causing the joints to "start" and "air-lock" in the system. The latter is removed by means of air-valves.

Flues of boiler must be kept clean.

The supply cistern must contain at least 4 in. of water when the apparatus is cold.

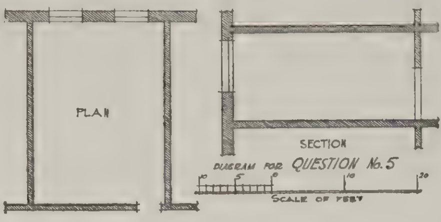
Question 4.—Draw to a scale of 2 ft. to 1 in. the plan of a bath-room, with lavatory and w.c. and housemaid's sink adjoining, for a good class house. Show the arrangement of the fittings in each apartment, and give sketch sections through the bath, lavatory basin, w.c., and sink, showing the pipes and figure on their sizes. What materials would you recommend for the floor and wall finishings?

Answer.—See diagram.

Materials for floor of bath-room—lead or jointless composition floor. W.C. and h.m.c. composition floors. Walls tiled.

Question 5.—What would you consider a "vitiated atmosphere" for a class-room for forty children?

State what ventilation you would provide for such a room and the standard of air allowance per scholar you would require and the heating surface you would provide by way of h.w. radiators. Show your calculations clearly.



Answer.—An atmosphere charged with three parts per thousand carbonic acid gas is considered to be "vitiated."

Standard of air allowance per scholar 130 cubic feet.

Number of scholars = 40.

See diagram for room fulfilling this condition.

Heating.—Area of glass = 63 square feet = G.

Number of changes of air per hour = 5 = N.

Cubic contents of room in ft.^{3} = 5400 = C.

Area of external wall in ft.^{2} = 153 = W.

Difference of temperatures of internal and external air = 60° — 32° = 28° Fahr. = r.

B.T.U. lost per hour = $(\cdot 02NC + G + \frac{1}{4}W) \times r$.

$= (\cdot 02 \times 5 \times 5400 + 63 + 38) \times 28.$

= 17948 British Thermal Units.

$\therefore$ heating surface required $= \frac{17948}{160}$

= 112 sq. ft. of radiator surface.

Ventilation.—

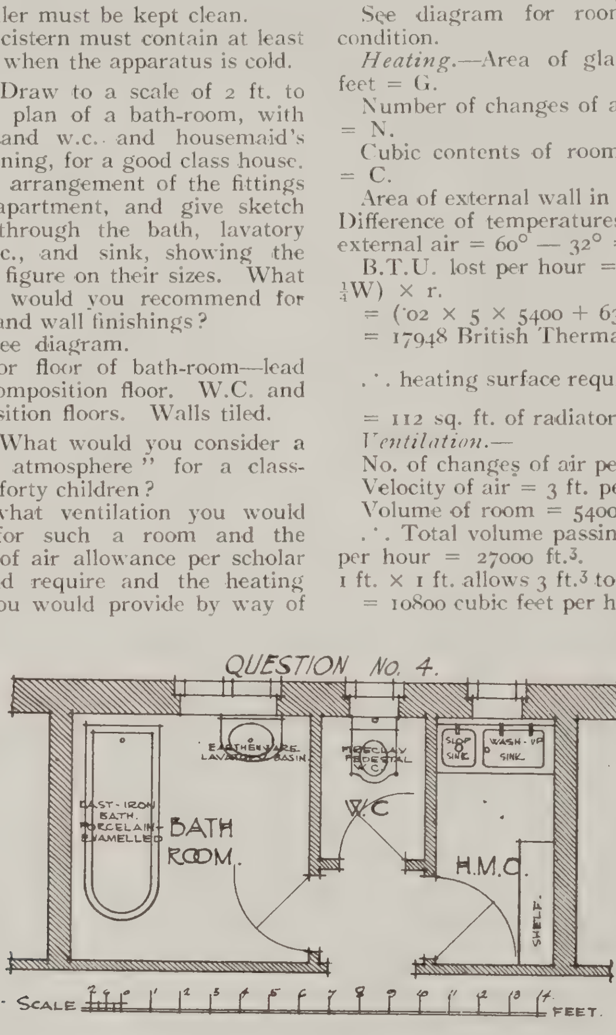
No. of changes of air per hour = 5.

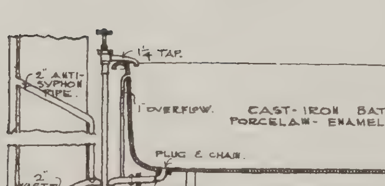
Velocity of air = 3 ft. per second.

Volume of room = 5400 cubic feet.

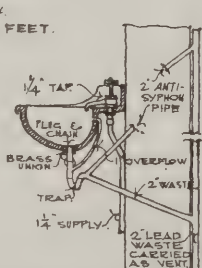
$\therefore$ Total volume passing through ducts per hour = 27000 ft.^{3}. An extract duct 1 ft. × 1 ft. allows 3 ft.^{3} to pass per second.

= 10800 cubic feet per hour.

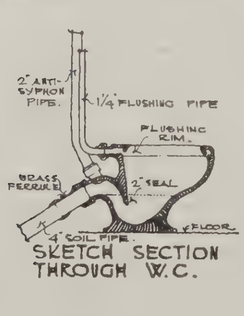




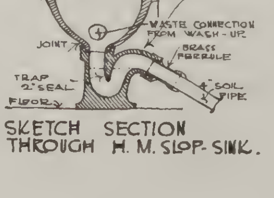
SKETCH SECTION THROUGH BATH.



SKETCH SECTION THRO' LAVATORY BASIN.



SKETCH SECTION THROUGH W.C.


1¼" TAP.
FLUSHING RIM (WITH FLUSHING PIPE)
WOOD ROLL
ANTI-SYPHON PIPE - SIMILAR TO W.C.
WASTE CONNECTION FROM WASH-UP.
JOINT
BRASS FERRULE
TRAP 2" SEAL
4" SOIL PIPE
FLOOR

SKETCH SECTION THROUGH H. M. SLOP-SINK.

$\therefore$ area of duct required $= \frac{27000}{10800}$ square feet.

Inlets should be slightly larger.

Question 6.—What reasons can you for and against fixed lavatory b in bedrooms?

If you had to select baths, tories, sinks, and w.c.'s for a mansion, to what special points w you direct your attention?

What is the difference bet "wash-down," "valve," "syphonic action" w.c.'s, and are water-waste-preventing cis made with sloping sides?

Answer.—Fixed lavatory basins in rooms are a great convenience. must, however, be kept thoroughly c Since, in most lavatory basins, the flow is the part which becomes fouled is allowed to remain so, it is an open tion whether basins in these posi should be fitted with overflows. Stea a bedroom is objectionable, and prote of the wall surface around the against splashing is almost essential. almost every case lavatory basins in rooms entail a considerable extensio the drainage system, which is always desirable.

Baths.—Freedom from sharp angles corners; made of impervious material an incorrodible surface. The baths sh not absorb an exceessive amount of No outlet to be less than 2 in. diam and all to have plug and chain—the sanitary form of stopper to waste.

Lavatories.—No enclosure round ba Overflows accessible and easily clea Large inlets and outlets. Plug and c stopper. No angles or corners where ing may occur. Fairly deep basin.

Sinks to be glazed stoneware, so be easily cleaned. Pantry sinks to be enough for washing-up purposes. But sinks lead-lined, to minimise risk of br ages, and sufficiently deep to take nary bottles.

W.C.'s.—Complete cleansing at flush. Large water area in container, surface exposed to fouling to be a mum. Back of container nearly vert and flushing to be as quiet an operatio possible.

Wash-Down W.C.'s.—The flush is tirely into the container, passing thr the trap into the soil-pipe. A two-ga flush is not always sufficient to thorou cleanse the pan.

Valve Closets have a double water- the upper in the container maintaine a rubber flap-valve, the lower in the t the valve-box between is ventilated 2-in. pipe. The supply of water is pendent on the person operating the and a bellows regulates the supply the handle is dropped. The discharg into the basin, which has a very l water area, preventing the sides from ing, and, on this account, as well as on of the absence of noise in flushing, closets find considerable favour. mechanism, being rather complica necessitates enclosure in a casing, e wood or earthenware.

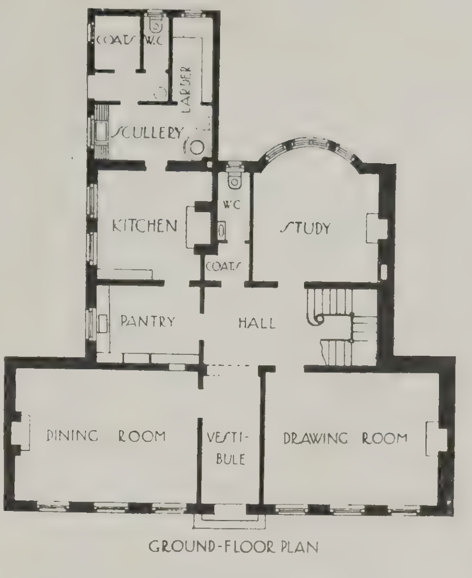
Syphonic Action W.C.'s can be arra with either single or double water-s the basin is cleaned out by syphonage well as by the flush. In some cases service pipe has two connections, on the syphon and the other to the c basin. The water-area in the contain very large, and the trappage deep, some closets of this type require a th gallon flush.

Water-waste-preventing cisterns

ıg sides contain a larger " head " of r than if the sides were straight. In ion, castings with sloping sides are easily withdrawn from the mould.

tion 7.—You are required to report ıpon a site for a large country house ituated in a hilly district five miles rom a town and with a small river unning through the grounds—the site ndicated for the house is on sloping ;round. Your report should be a avourable one, and your reasons for nding it so must be stated. Notes n soil, water supply, and drainage natters should be included in your eport.

swer.—I have visited the site which ɔropose to buy at ——, and have to t as follows: The site is easily acces- by motor, and the roads appear to be in good condition. It is excellent in on, standing high, and sloping gently ·ds the south. It is sheltered com- y from the north winds by pine trees. very unlikely that the view will be ıcted in the future. The subsoil is rable—firm gravel and chalk—ren- g unnecessary any subsoil drainage, suggest that the house be placed on igher part of the land where the ap- t sterility of the soil indicates that is less moisture at this point than at ther. I have made full inquiry about ter supply. The nearest spring is r more than half a mile away, and, as s the only alternative to the stream runs through the site, there is no that the water of the stream should lised. It has not been known to fail in the hottest weather. I have had an analysis of the water, with en- satisfactory results. The water dis- soap fairly easily, indicating a nt softness. Samples placed in tubes show no sign of incipient ation, and Condy's fluid when mixed the water does not bleach at all. I mend that the water be filtered and nto large underground tanks for e: As an additional precaution :efeld " filters may be placed inside ɔuse at all points where the water is for dietetic purposes. The present ion of the water is obviously the l one, but the large quantity under e in the tanks will enable any ad- ɛnt of differences to be made in the of subsequent pollution. As regards ge, I am of opinion that a system of eptic tanks will best meet the con- of the case. The apparatus should be ged in duplicate, with separate tanks e of being used singly or simul- ısly. I understand that it is your n to hold large house-parties at s seasons of the year, and this dupli- ystem of collecting chambers com- solves the problem of the variation amount of sewage to be dealt with. ter beds will be composed of broken e clinker—easily obtainable in the -4 ft. 6 in. to 6 ft. deep, graded so ıe smaller pieces are at the top and rger at the bottom. Of the proper n on the site for the system there is bt whatever. Due east of the posi- have already indicated for the house s a pit-like formation screened en- rom the house by trees; by placing nks and filters in the hollow an fall is obtained, and, as the bottom sand, it is a simple matter to dis- f the effluent—by this time practi- ure—by means of an ordinary soak- This completes, I think, all the important considerations which it duty to place before you; and, in sion, I have on hesitation in saying that the site is an admirable one and presents but few difficulties, and these easily surmountable.



ST. ANSELM'S VICARAGE, KENNINGTON.
ADSHEAD AND RAMSEY, ARCHITECTS.
(See also Supplementary Plate, and Note on page 371.)

Question 8.—The domestic servant problem is one to which every architect must pay careful attention to ensure the economical working of a house.

State what points you would put forward to a client under this heading if you were showing him plans for a terrace house of six storeys.

Answer.—Lighting by electricity.

Electric power and electric appliances as far as possible.

Lifts—coal, food, and passenger.

Pantry next dining room, with food-lift from kitchen.

Gas cooker and gas fires, if desired.

Complete radiator installation and separate hot-water boiler.

Water points for cleaning purposes on every floor.

Maid's store on upper floor.

Vacuum cleaning installation to all rooms, passages, etc., discharging into basement cellar.

Speaking tubes.

Telephone box.

Jointless floor in kitchen (not cement).

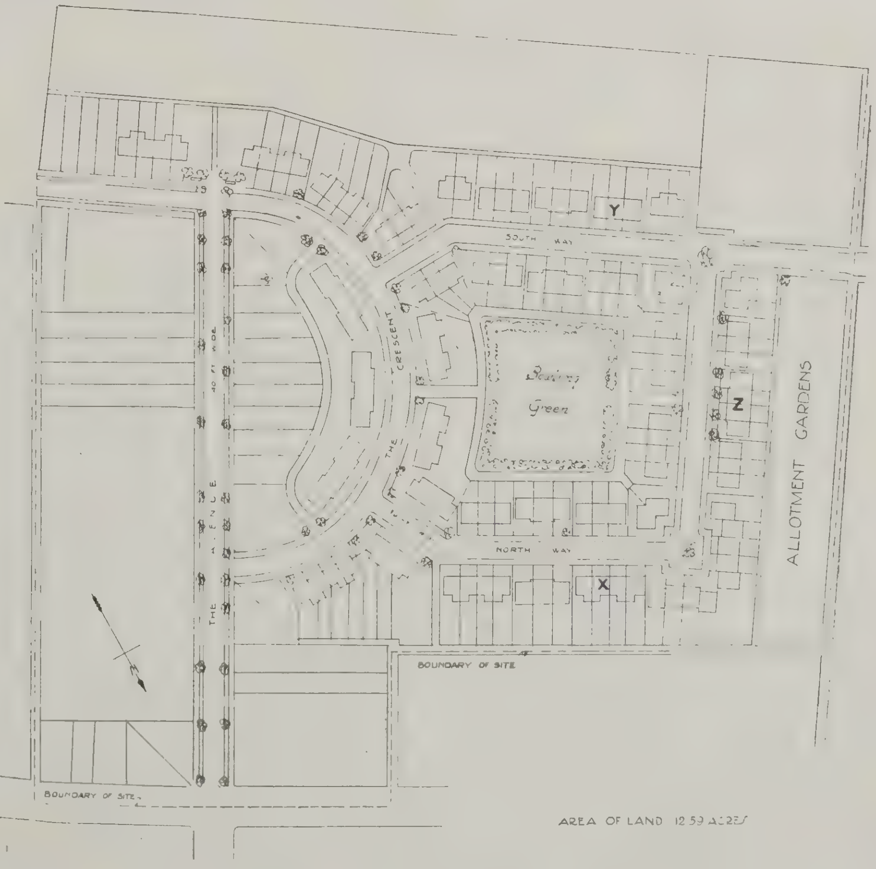
Tiled walls in kitchen and scullery.

Rounded corners, skirtings, etc., in kitchen and offices.

COMPETITIONS.

Workmen's Dwellings, Chester.

The City Corporation of Chester invite designs for workmen's dwellings on their estate at Hough Green, for which a general development plan has been prepared. Mr. Patrick Abercrombie has been appointed assessor. Premiums: Designs placed first, second, and third will receive premiums of £50, £25, and £10 respectively, the first premium to merge into the commission on buildings erected; the three premiated designs to become the corporation's property. Requirements: The accompanying plan shows the site plan approved by the corporation. It is intended to adhere to the positions of the houses and the divisions into groups as shown, but not to the exact outline of each block, which would vary according to the competitor's detailed arrangement of house planning. Competitors are required to send in designs for one block of each of the three types marked X, Y, and Z. The designs are to be based on a study of the plans issued by the L.G.B. in their memorandum on March 25, 1913, with respect to houses for the working classes. Full freedom is given in the selection of materials and type of elevation. Each house to be provided with a scullery, bath, and w.c., and, except type Z, no



SITE PLAN FOR WORKMEN'S DWELLINGS, CHESTER.

house must contain less than three bedrooms. Type X: Group of four houses, each containing five rooms, *i.e.*, parlour, living-room kitchen, and three bedrooms, to cost not more than £240 each. Type Y: Group of three houses, each containing four rooms, *i.e.*, living-room kitchen and three bedrooms, to cost not more than £180 each. Type Z: Group of eight tenements, built in two storeys, in pairs; each tenement is to contain two rooms, *i.e.*, living-room kitchen and bedroom; each pair of tenements is to cost not more than £195. In order that all competitors may be on the same footing with regard to content and cost, it has been decided to place the price per cubic foot of contents at 6d. Drawings required: (i.) Complete plans, elevations, and two sections of the three types of blocks of houses, to the scale of 8 ft. to 1 in. (ii.) Block plan of each block showing its position on the plot and its drainage plan. It may be assumed that the sewer will pass down the middle of the road in front of each block. No report may be submitted, but full notes as to materials and character of design should be put on the drawings; plans and sections must be fully figured. Designs are to be sent to the Town Clerk, Town Hall, Chester.

Bridge Statuary, Glasgow.

Sir George Frampton, R.A., assessor in the competition for the provision of symbolical statuary on the four abutment piers of the Radnor Street Bridge, Kelvingrove Park, has selected the design submitted by Mr. Paul R. Montford. Premiums of £50 and £25 have been awarded respectively to Mr. A. Proudfoot, of Glasgow, and Mr. R. Garbe, of London.

Bengal Chamber of Commerce.

In a limited competition for the above building, the assessor, Mr. John Begg, F.R.I.B.A., consulting architect to the Government of India, has selected the design of Messrs. Stevens, Gregson, and Co., of Bombay.

Workmen's Dwellings, Penzance.

Penzance Town Council have decided to invite competitive designs for workmen's dwellings, which it is proposed to erect at a cost of £6,000.

Fire Station, etc., Mold.

Mold U.D.C. have adopted the design submitted by Mr. John D. Lewis, of Denbigh, in the competition for a fire station and caretaker's house to be erected in Earl Road, Mold.

Change of Address, etc.

Mr. Leonard V. Hunt, F.R.I.B.A., has moved from 34, Queen Street, E.C., to 8, King William Street, Charing Cross, W.C. The telephone number is Regent 5623.

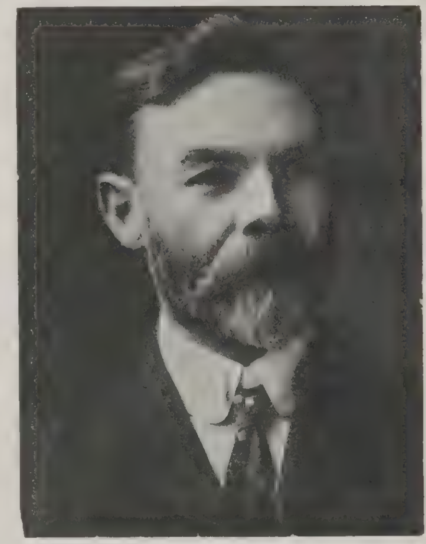
Mr. Alfred Crampton, A.R.I.B.A., has begun practice in Clwyd Street, Rhyl, and also in Prestatyn.

OBITUARY.

Mr. George E. Bond.

We regret to announce the death on the evening of Wednesday, May 20, of Mr. George E. Bond, J.P., of Rochester, immediate past-president of the Society of Architects.

He began practice in the City of Rochester upwards of thirty years ago. Some of the principal buildings in the district were erected from his designs, including the Town Hall and Municipal Buildings, Technical Institute, Free Library, Royal Sailors' Home, Masonic Club, schools, theatres, and other public buildings in Chatham, and a number of schools and other buildings in Rochester. He was the architect to a number of public bodies, and had an extensive and varied practice in the county of Kent. He was a J.P. for the city of Rochester, president of the Liberal Club, and a trustee of the savings bank. He was also a prominent Freemason, and one of the founders of the Society of Architects Lodge.



THE LATE MR. GEORGE E. BOND.

He joined the Society of Architects in 1888, and for many years served on the Council, and was president for four years in succession. He was an ardent supporter of the Society's registration policy, and was a most fluent exponent of his views both in committee and in public. As a speaker Mr. Bond was particularly fluent. He possessed a most remarkable memory and would deliver a long speech without once referring to his prearranged draft, yet adhering to it almost word for word.

It was during his presidency that the negotiations between the Society and the Royal Institute took place in regard to registration and amalgamation, in which he took a very active part. Mr. Bond was a member of the Beaux-Arts Committee and a keen supporter of its work. By
death the Society of Architects loses
support of a member who never sp
himself in advancing its interests. He
tended its meetings while suffering acu
from the complaint which afterw
proved fatal, and kept in touch with
work by correspondence almost to the

Alderman Wm. Thompson.

The death took place at Ruislip
Wednesday of Alderman William Tho
son, the well-known housing expert, at
age of fifty-one. On the previous da
had presided at a housing conferenc
Tunbridge Wells, and in the eve
visited Twickenham to speak in sup
of the Marble Hill Ferry Fund, a caus
had espoused with his accustomed zea
the public rights. A native of Southw
Alderman Thompson came to Londo
a schoolmaster, but soon forsook teach
He found his life's work in helpin
solve the problem of the housing of
working classes, and was soon recogn
as a leading authority on the sub
Chairman of the National Housing
form Council, a member of the Execu
Committee of the International Hou
Congress, and an ex-president of the
gress, he was much sought after
speaker on the subject, and his reputa
stood high on the Continent as a lead
housing reform. It is understood
much of the Town Planning Act was
to his advice. In the last few years
chief business interest was in Ru
Manor, of which he was managing d
tor. The estate embodies a number of
ideas for which he and others had
working so long.

In Richmond, where he had been Ma
he was loved by the working classes a
people's champion, and to his efforts
due open spaces, a much-needed refor
local charities, the provision of workm
dwellings, allotments, and the succe
defence of public rights over the rive
lands at Ham. He was the autho
several books on the housing question

THE LABOUR CRISIS.

As we briefly recorded in last w
issue, the conference between the Lo
Master Builders' Association and the
presentatives of the trade unions inv
in the dispute was brought to an end
late hour on Monday night, May 18.
the following day the committees of
unions held a meeting at which it wa
cided to take a ballot upon the condi
of settlement proposed at the confer
and there seems to be good ground
anticipating that on this occasion the
will see the wisdom of voting for ac
ance of the very reasonable terms
which the employers are prepared to
to an immediate resumption of
The result of the ballot will probabl
made known to-day (Wednesday).

A NEW SELF-BINDING CASE for "THE JOURNAL"

has been specially prepared by which Subscribers are enabled to file and bind each week's issue of **"The Journal."** By an ingenious mechanical device copies can be fixed in the binder separately, so that at the end of the half-year the complete volume will be in a strongly bound form ready for the bookcase without the expense of further binding. The Case is handsomely made, bound in full cloth (green) with gilt lettering.

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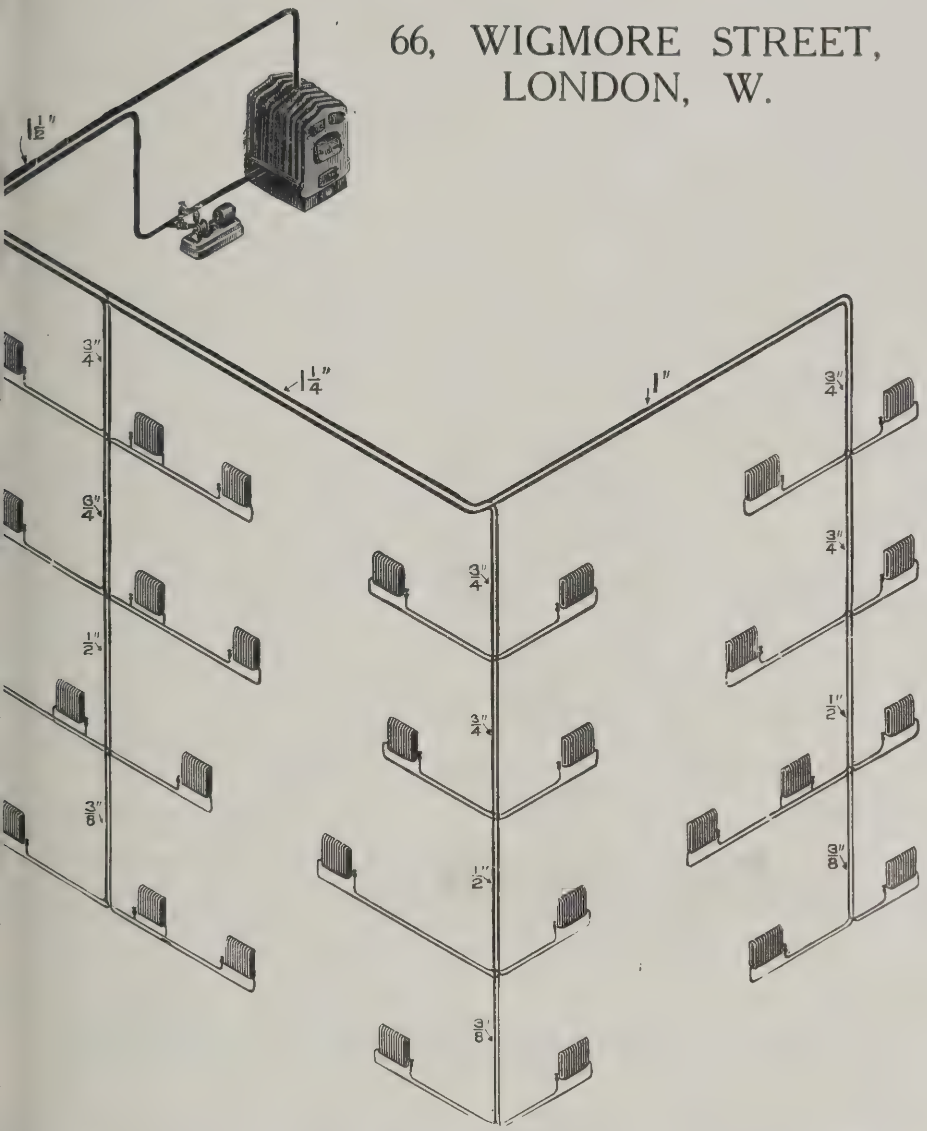

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Architect, J. W. Woolnough, Esq

NELSON HOSPITAL, Wimbledon.
Architects, Messrs. Hatch & Hinds

SEAMEN'S HOSPITAL and SCHOOL of TROPICAL MEDICINE, Albert Docks, E.
Architects, Messrs. A. Marshall Mackenzie & Son.

OFFICES of L.B. and S.C. Rly., London Bridge.
C. L. Morgan, Esq. (Engineer)

SHOWROOMS of MINERVA MOTOR CO., Tottenham Court Road, W.
Architect, G. Vernon, Esq

ADDITIONAL PREMISES of PRUDENTIAL ASSURANCE CO., Holborn, E.C.

RECREATION HALL, Southall.
Architects, Messrs. A. Marshall Mackenzie & Son

ST. NICHOLAS CHURCH, Charlwood.
Architect, Clyde Young, Esq.

ALL SAINTS' CHURCH, Goodmayes.
Architect, P. K. Allen, Esq.

AVINGTON PARK, Alresford.
Architects, Messrs. Millar & Cox.

THE GATE OF ST. JOHN, Ryde
Architects, Messrs. Albury, Rising & Morgan.

Etc., etc.

essrs. BENHAM'S Cooking pparatus is all manufactured in eir works at Battersea, S.W.

hey claim that each fitting is the st of its kind, and every effort s been made to secure Durability, Economy, and Efficiency.

The Kitchen of 46, Grosvenor Street, W., showing Coal Range (French pattern), with Charcoal Grill, Plate Rack and Tiled Hood; Gas Hot Plate with Ovens under, Gas Roasting Oven, Gas Pastry Oven, central Wood Table with Steam Hot Closet at one end; Glazed Hood over Gas Fittings.
Architects, Messrs. Detmar Blow and Fernand Billerey.

ENHAM & SONS, Ltd., 66, Wigmore Street, LONDON, W

ELECTRICAL NOTES.

" Magnet " Electric Fires.

At the moment of writing it hardly appears appropriate to refer to heating devices, but the sunny summertime does not last all the year round, and is, indeed, the very season that gives the best facilities for revising the heating arrangements. The " Magnet " electric fires, as their name suggests, have beeen introduced by the General Electric Company, Ltd., and are of two types, the rod and the panel type respectively. In the first, each heating element consists of a fireproof insulator rod, reinforced by a central steel rod and having a helical fine groove moulded in its surface. In the grooves is wound a special non-oxidising wire suitable for withstanding a high temperature, and connected at the end to a nickel terminal strip of large surface, which ensures coolness. Each rod consumes 500 watts (*i.e.*, ½ unit per hour). The standard sizes of the fires are for 1,500, 2,000, and 3,000 watts, and a graduated heating effect can be obtained by means of two tumbler switches. A curved aluminium reflector is arranged at a suitable distance behind the rods, in order to throw out the heat and light rays effectively.

In the panel type special curved fireproof insulators, with a longitudinal groove running from top to bottom, are mounted vertically side by side. A helix of non-oxidising high-resistance wire lies in each of these grooves, being anchored in them through a hole at each end of the groove, the wire passing continuously from one insulator to the other. The terminals are arranged at the bottom corners. Each insulator forms an element, and the consumption of each element, as in the rod type, is 500 watts. The standard fires are made up for 1,500 and 2,000 watts, and the control is obtained as in the rod type, by means of two switches. These two types of fires are made in numerous designs to suit many styles of architecture, the finishes being in iron, copper, or brass —modern, Adam, Sheraton, and Georgian styles. A twelvemonths' guarantee is given, and we understand that the company is inaugurating a novel scheme whereby those interested in the supply of heaters on a large scale will be able to extend their activities considerably, whether in regard to sale, hire, or hire-purchase.

New " Diamond " Switches.

Writing of electric heaters leads naturally to a new form of switch for controlling cooking and heating apparatus, made by the Hart Manufacturing Company, the well-known makers of the " Diamond H " switch. This is a series-parallel switch, which gives three heats and an off position. It will break 20 ampères at 250 volts, and is provided with porcelain dampers integral with the base, into which the blades of the switch pass directly they leave the contact springs, the arc being immediately extinguished effectually by the cooling effect of the porcelain. This is proved by the fact that before these dampers were employed the switch could only break 10 ampères. The switch is absolutely fireproof, and is provided with the latest pattern terminal, which prevents the wires being nicked and ensures a good contact. The mechanism includes the well-known snap make and break. Another switch of a slightly different pattern breaks 40 ampères at 250 volts, or 20 ampères at volts. It also has slotted porcelain da ing blocks, but of different design.

Other new devices by these maker clude a hotel bedroom door switch, w cuts off the light inside the room wher door is locked from the outside, thus ef ing considerable economy in use; a sw for use on motor cars fitted with ele starters, and able to carry up to 200 pères for a short period; and a remote trol switch for changing over from supply to another in the event of fa for use in theatres, etc.

The Fan Season.

This is the time when the maker electric fans rush into print and endea to make the best of what is usually a s season for them. This year we find old friends the G.E.C. " Freezor " the " Ediswan " fans well to the fore, also other well-known makes, such Veritys.

Amongst new designs this year notice the Pitter " Multiblade " fan, principle of which will be described future issue. Something new is also Sturtevant " Ready-to-Run " portable tilating set. These are little motor-dr blowers, which can be built into ou walls or windows and introduce fresh from outside, in contradistinction fans, which only keep the existing ai a room in circulation. The ventila sets are useful where there are l numbers of people and fresh air is a ne sity. Care should, however, be taken hot or dusty air is not blown in, and can be guarded against by the use o air-washing arrangement which both c and filters the air.

Fittings for Electric Lighting.

E 4723.
Flexible Desk Standard.
8/6

If your requirements be confined to inexpensive table lamps, as illustrated herewith, we are in an equally favourable position to fulfil them as though they were for an expensive electrolier.

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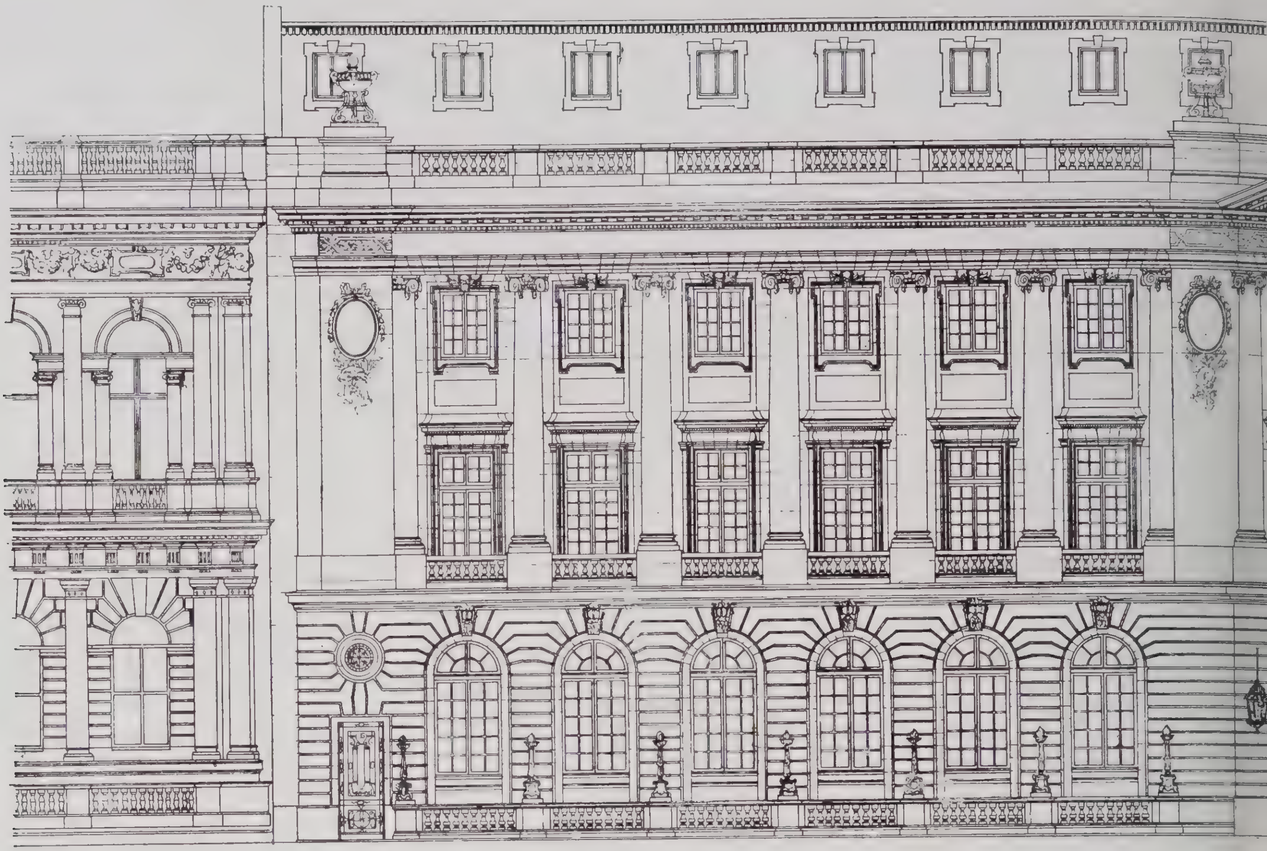
NEWPORT: 190, Commercial Road.
LEEDS: 6, White Horse St., Boar Lane
SWANSEA: 14, Heathfield Street.
CARDIFF: 4, Westgate Street.



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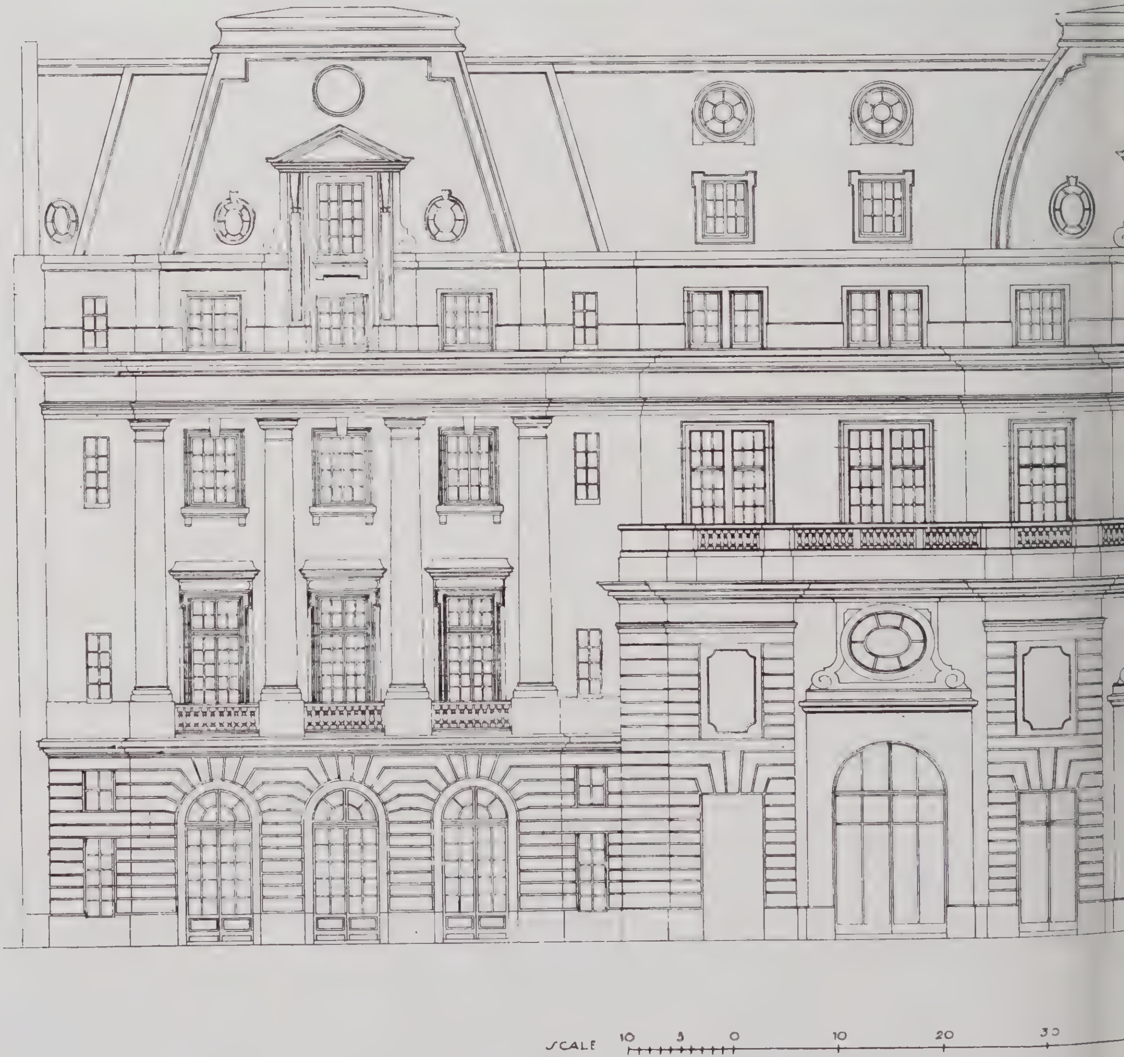
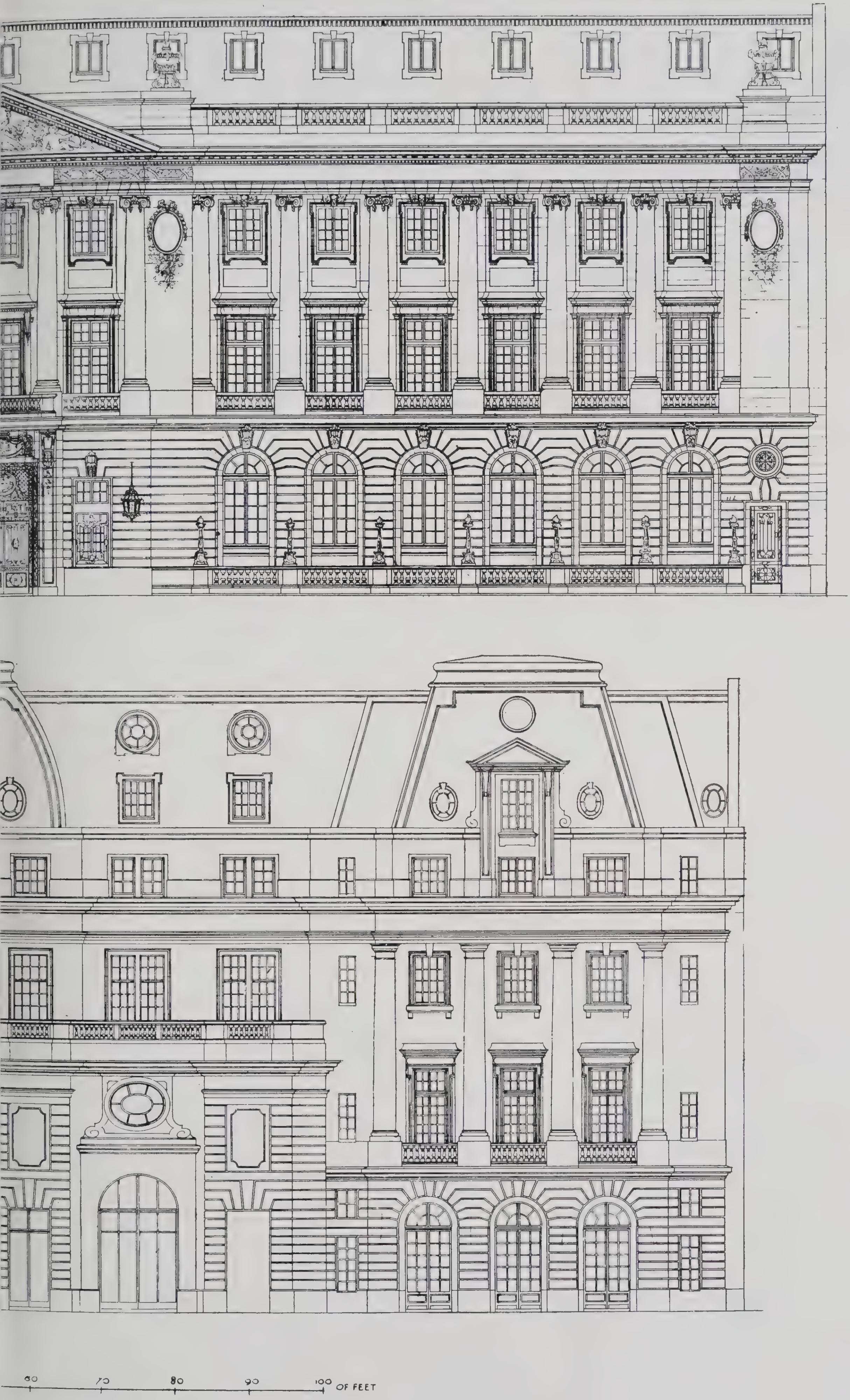


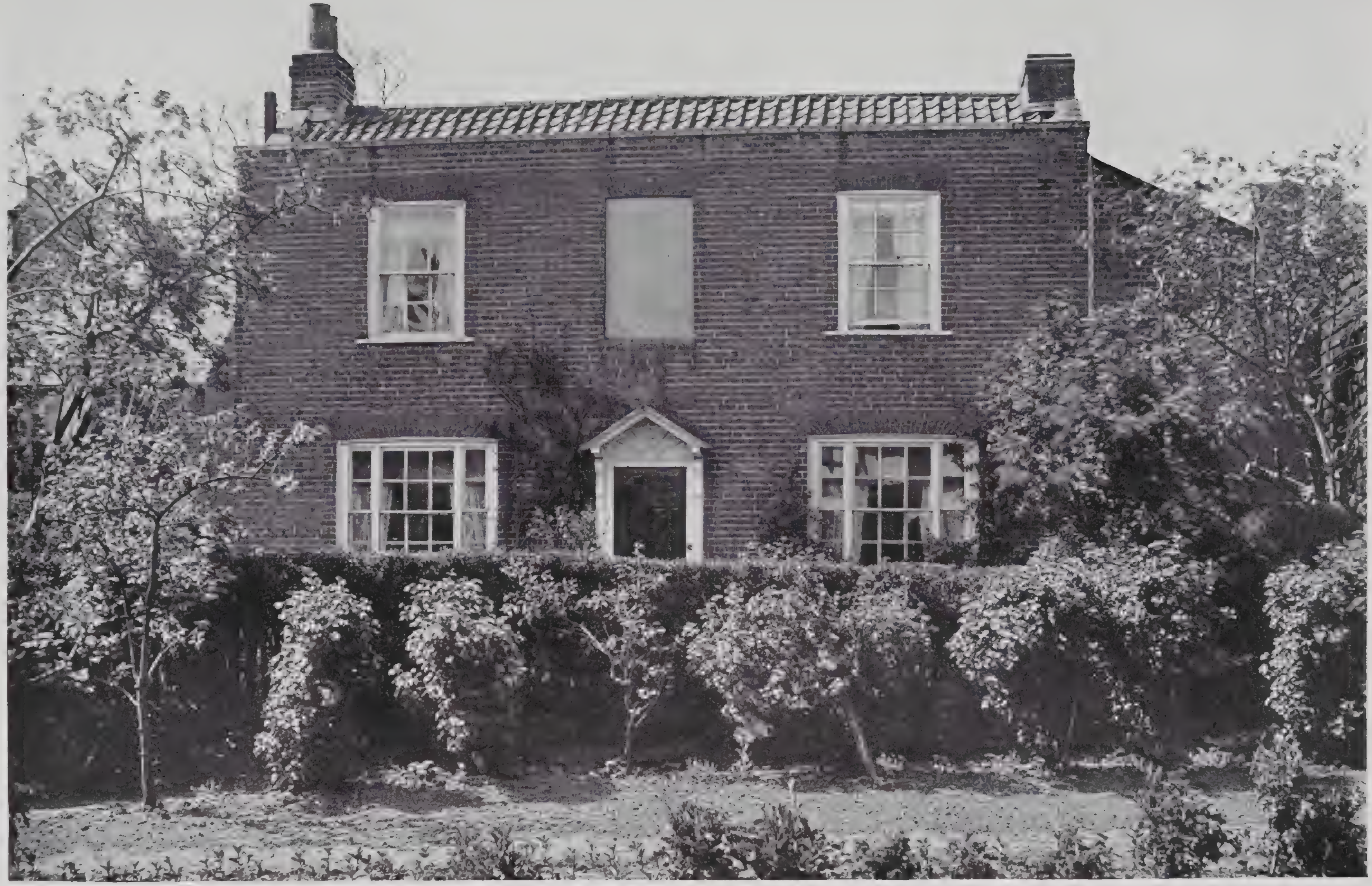
WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW S

MEWÈS & DAVIS AND

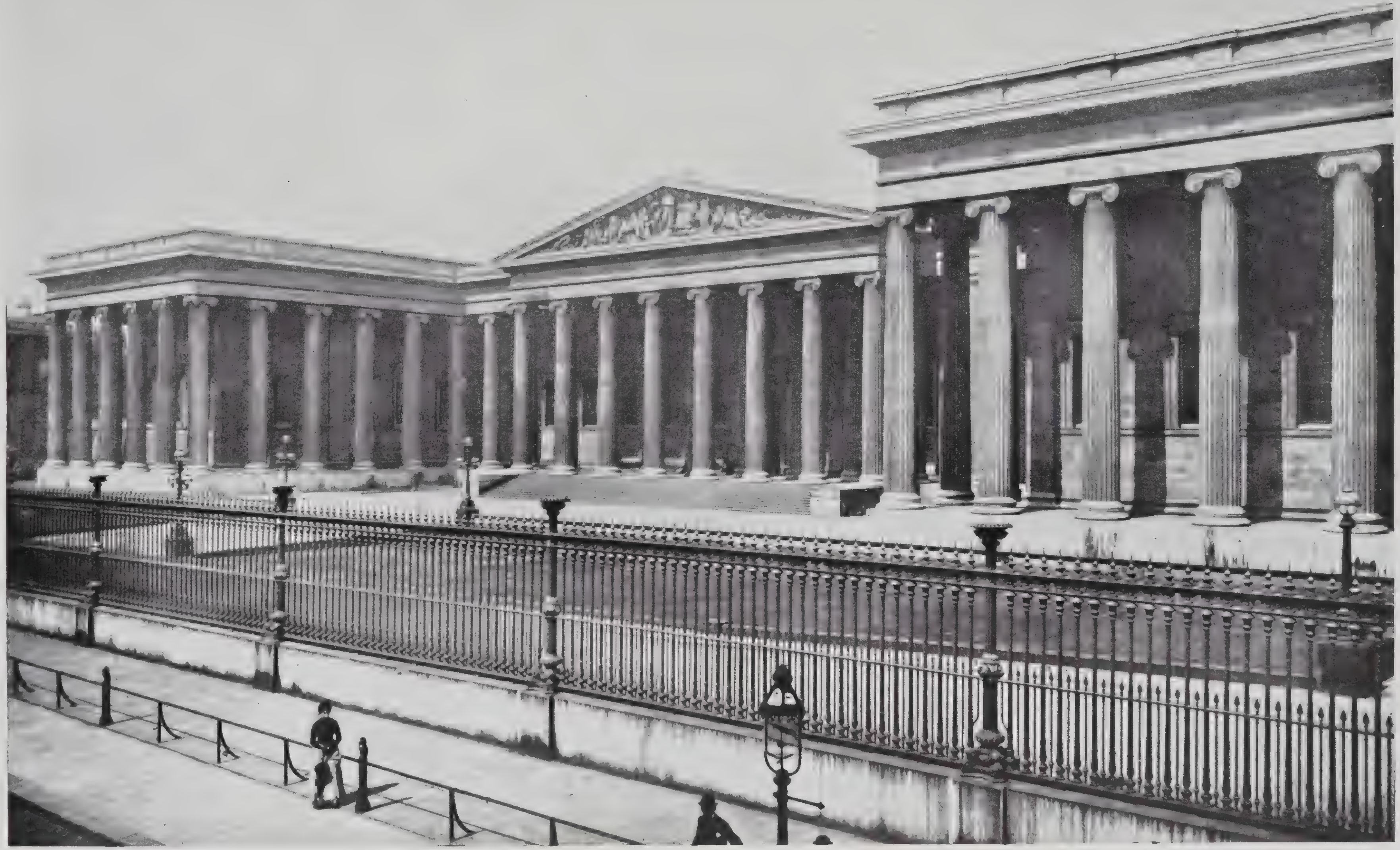


-THE ROYAL AUTOMOBILE CLUB, PALL MALL, LONDON.

HASE, ARCHITECTS.

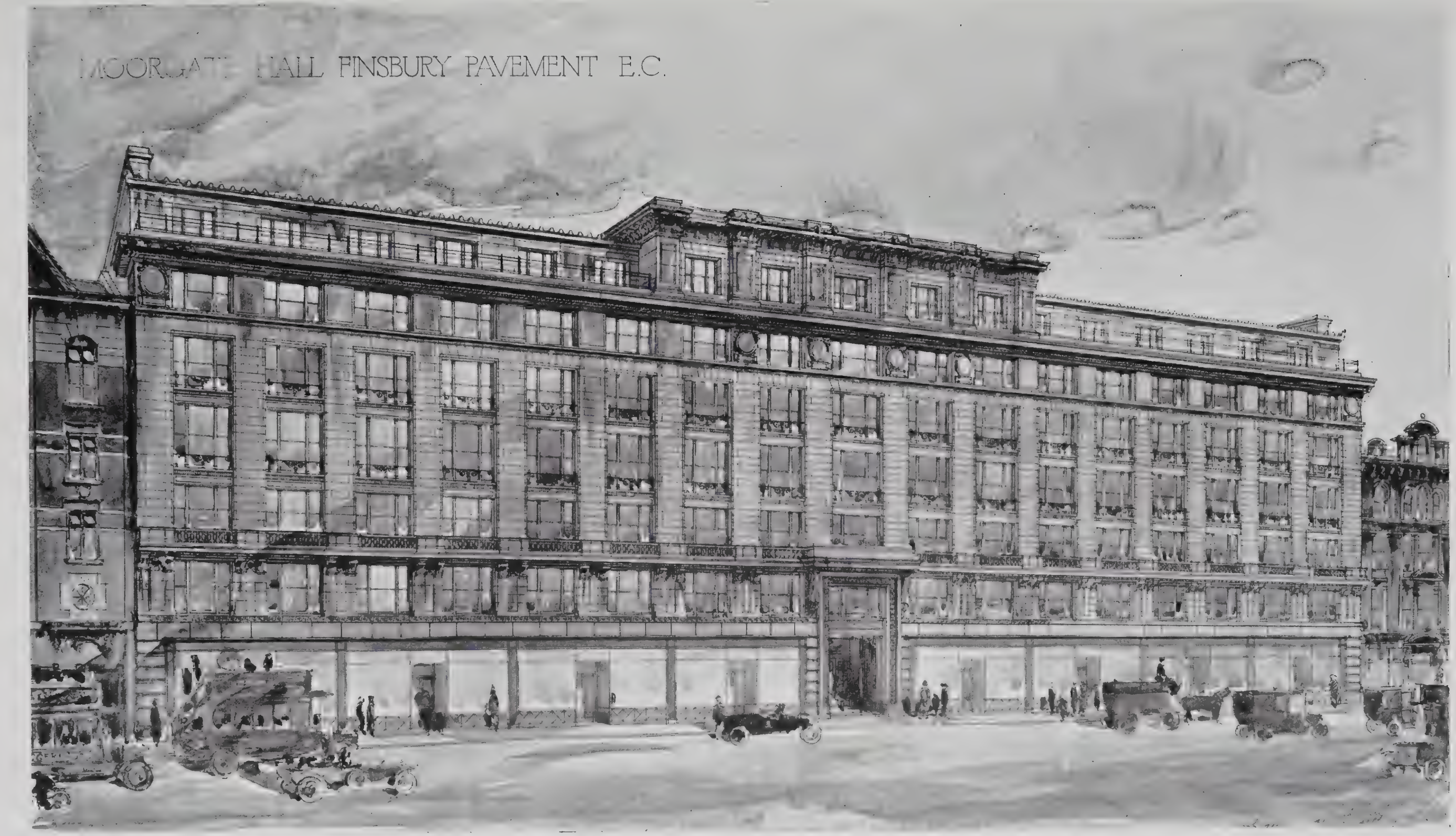


SMALL HOUSES OF THE LATE GEORGIAN PERIOD. X.—HOUSE AT COBHAM, SURREY.



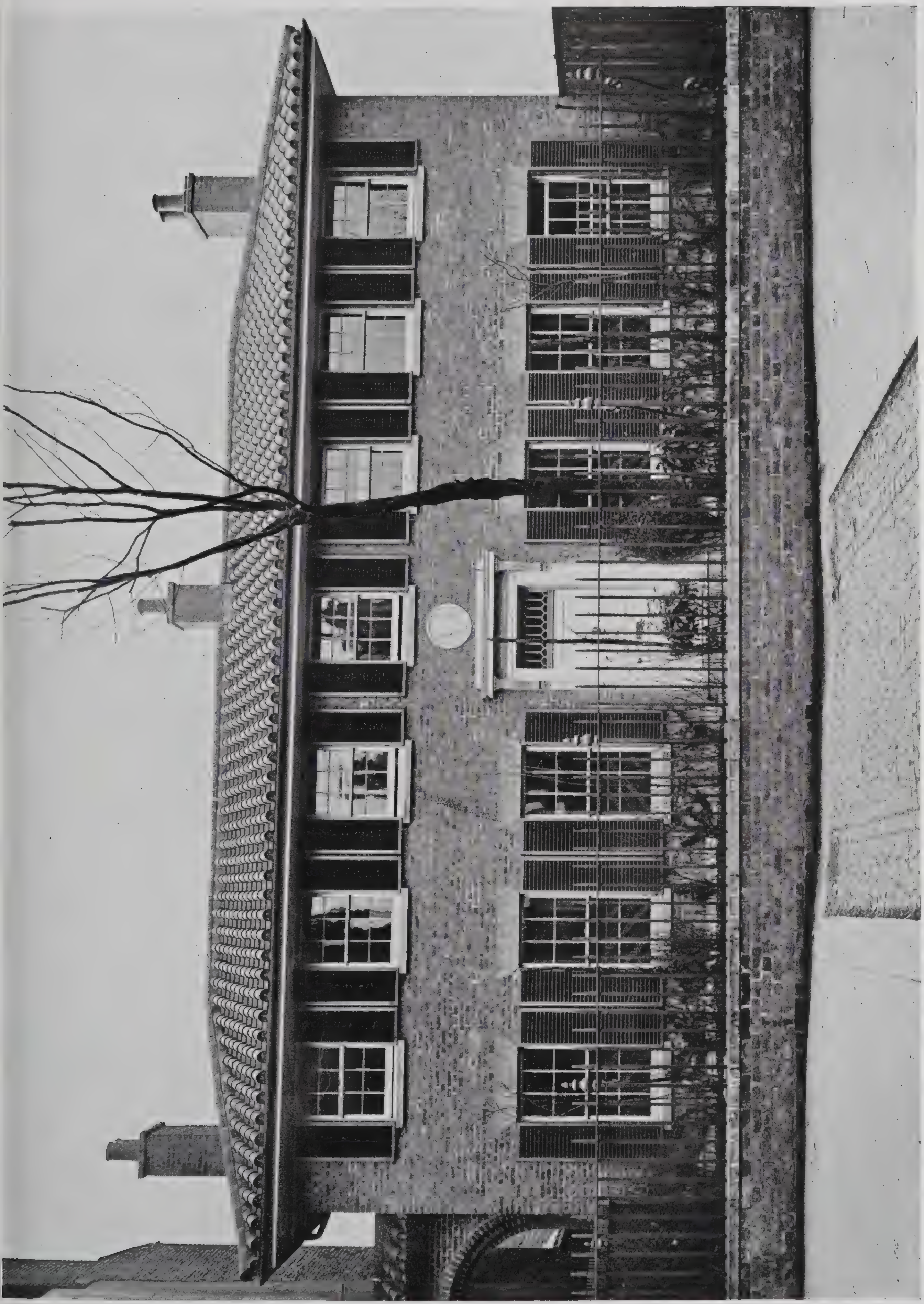
MONUMENTAL ARCHITECTURE. XXI.—THE BRITISH MUSEUM, LONDON.

SIR ROBERT SMIRKE, R.A., ARCHITECT.


MOORGATE HALL FINSBURY PAVEMENT E.C.

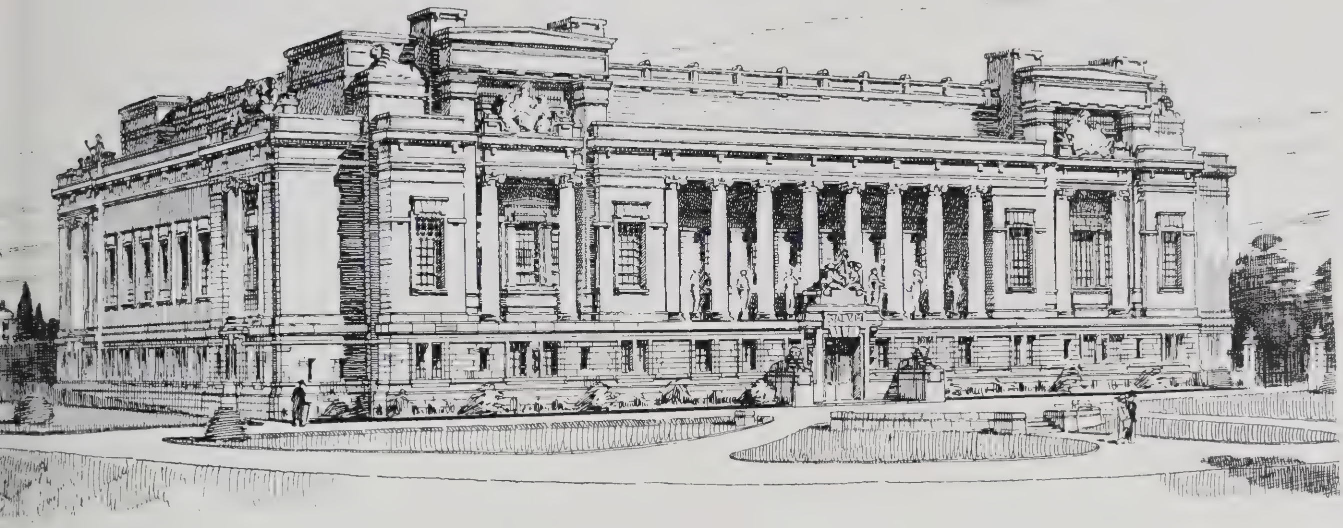
CURRENT ARCHITECTURE. LXIII.—MOORGATE HALL, FINSBURY PAVEMENT, LONDON, E.C.

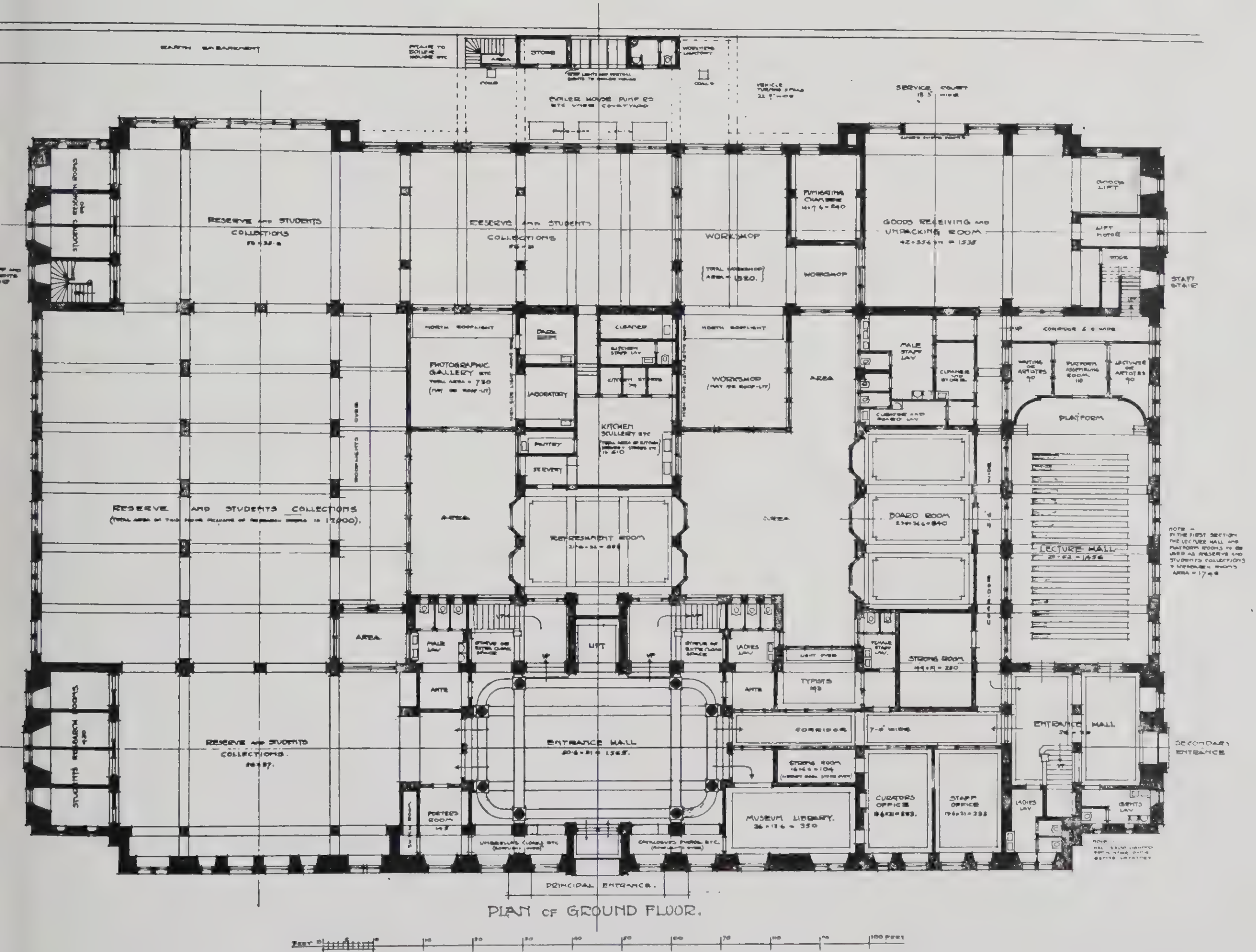
RICHARDSON AND GILL, ARCHITECTS.



CURRENT ARCHITECTURE. LXIV.—ST. ANSELM'S VICARAGE, KENNINGTON, LONDON, S.E.

ADSHEAD AND RAMSEY, ARCHITECTS.




EARTH EMBANKMENT
STAIR TO BOILER HOUSE ETC
AREA
STORE
COALS
WORKMENS LAVATORY
BOILER HOUSE PUMP RM ETC UNDER COURTYARD
VEHICLE TURNING SPACE 22' 9" WIDE
SERVICE COURT 18' 3" WIDE
STUDENTS RESEARCH ROOMS
RESERVE AND STUDENTS COLLECTIONS
COLLECTIONS
RESERVE AND STUDENTS COLLECTIONS
WORKSHOP
(TOTAL WORKSHOP AREA = 1320.)
FUMIGATING CHAMBER 14 × 17·6 = 240
WORKSHOP
GOODS RECEIVING AND UNPACKING ROOM 42 × 35·6 = 1538
GOODS LIFT
LIFT MOTOR
STORE
STAFF STAIR
NORTH ROOFLIGHT
PHOTOGRAPHIC GALLERY ETC TOTAL AREA = 730 (MAY BE ROOF-LIT)
DARK ROOM
LABORATORY
CLEANER
KITCHEN STAFF LAV
KITCHEN STORES
KITCHEN SCULLERY ETC
PANTRY
SERVERY
NORTH ROOFLIGHT
WORKSHOP (MAY BE ROOF-LIT)
AREA
MALE STAFF LAV
CLEANERS STORE
CORRIDOR 6' 0" WIDE
WAITING OF ARTISTES 90
PLATFORM ASSEMBLING ROOM 110
LECTURE OF ARTISTES 90
PLATFORM
RESERVE AND STUDENTS COLLECTIONS (TOTAL AREA OF THIS FLOOR INCLUSIVE OF RESEARCH ROOMS IS 12000).
AREA
REFRESHMENT ROOM
AREA
BOARD ROOM 23 × 36·6 = 840
LECTURE HALL 29 × 62 = 1456
NOTE — IN THE FIRST SECTION THE LECTURE HALL AND PLATFORM ROOMS TO BE USED AS RESERVE AND STUDENTS COLLECTIONS & RESEARCH ROOMS AREA = 1748
AREA
MALE LAV
LIFT
LADIES LAV
LIGHT OVER
FEMALE STAFF LAV
STRONG ROOM 14 × 19 = 280
TYPISTS 193
ANTE
ANTE
RESERVE AND STUDENTS COLLECTIONS.
STUDENTS RESEARCH ROOMS
ENTRANCE HALL 20·6 × 21 = 1365.
CORRIDOR
7' 0" WIDE
ENTRANCE HALL
SECONDARY ENTRANCE
STRONG ROOM 16 × 6·6 = 104
PORTERS ROOM 143
MUSEUM LIBRARY. 26 × 13·6 = 350
CURATORS OFFICE
STAFF OFFICE
LADIES LAV
GENTS LAV
UMBRELLAS, CLOAKS ETC.
CATALOGUES, PHOTOS ETC.
PRINCIPAL ENTRANCE.
PLAN OF GROUND FLOOR.
FEET 10 5 0 10 20 30 40 50 60 70 80 90 100 FEET

CURRENT ARCHITECTURE. LXV.—BELFAST ART GALLERY AND MUSEUM COMPETITION: FIRST-PREMIATED DESIGN.

JAMES CUMMING WYNNES, LICENTIATE, R.I.B.A., ARCHITECT.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art = The Articles of the Town Planning Procedure Regulations (Preparation of Schemes by L.A.s), 1914. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = A Local Authority's Scheme under the Act of 1909. Owner = Owner within the Meaning of the Lands Clauses Acts. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets.

No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B	Column 7.
STAGE 7. L.G.B.'s decision to approve scheme.	On receipt of Draft Order by L.G.B. approving scheme resolution to be passed approving Town Planning Committee's action in taking steps under Art. xix. (*a*), (*b*) and (*c*), and if circumstances require authorising Town Planning Committee to take steps to object to scheme under Arts. xix. (*a*) and xx. [Arts. xix. and xx.] N.B.—It is highly improbable that the circumstances above referred to would arise.	Within FOURTEEN DAYS from receipt of Draft Order from L.G.B. advertise in Local Paper that L.G.B. intend to approve scheme, and propose after receipt of paper containing the advertisement to publish notice in London Gazette as set out in Art. xix. (*a*). [Art. xix. (*a*) Sect. 54 (4) Act of 1909]			For TWENTY-ONE DAYS from date of publication by L.G.B. in the London Gazette deposit Draft Order for free inspection by any persons interested who must make objections (if any) in writing, within the said period. [Arts. xix. (*a*) and (*c*) and xx.]		(*a*) Immediately after publication of Advertisement (see Stage 7, Col. 3) in Local Paper send copy of paper to L.G.B. [Art. xix. (*b*)] (*b*) Within TWENTY-ONE DAYS of publication of notice in London Gazette send L.A.'s objections (if any) to scheme. (See Stage 7, Col. 2). [Arts. xix. (*a*) and xx. and Sect. 54 (4) Act of 1909]	(*a*) After receipt of copy of paper containing advertisement (see Stage 7, Col. 6B), L.G.B. inserts advertisement in London Gazette. [Art. xix. (*a*) and Sect. 54 (4), Act of 1909] (*b*) If L.G.B. receive any objections under Art. xix. (*a*) the L.G.B. lays its Draft Order before each House of Parliament for THIRTY DAYS of session, and if either House during that time presents an Address to His Majesty against the Draft Order, no further proceedings will be taken with regard to the scheme. [Art. xix. (*a*) and Sect. 54 (4), Act of 1909] (*c*) If the scheme contains Provisions suspending any enactment contained in a Public General Act, the L.G.B. lays a Draft of the scheme before each House of Parliament for FORTY DAYS of session, and if either House during that period presents an Address to His Majesty against such suspension, no further proceedings will be taken on the Draft Scheme. (Sect. 55 (2) Act of 1909.) (*d*) If no objections or no Address, L.G.B. approve scheme and send order approving scheme to L.A. [Art. xxi. (*a*)]

CHART OF TOWN PLANNING PROCEDURE FOR LOCAL AUTHORITIES' SCHEMES—STAGE 7.

THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, June 3, 1914. Volume XXXIX. No. 1013.

No. 87.

(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

JUNE 3, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1013.

The Sense of Mystery in Architecture.

IT has been asserted that while Classic architecture is definite, lucid, and coldly intellectual, the creations of our Mediæval forefathers in some strange manner appeal to the emotions and fill us with "a haunting sense of mystery." This is an erroneous statement—in the first place because it leads people to suppose that artists can dispense with intellectual discipline, and, secondly, because it is based on an assumption that this attribute of mystery is distinctive of Gothic buildings alone, and can never belong to a work of Classic architecture.

Before proceeding further it may be well to remove a misconception which may arise at this point. Perhaps some controversialist would reprove us for claiming for one style a quality supposed to be characteristic of a style essentially different from it. He might say, and with much plausibility, "We have emerged from the Middle Ages now. It is by the clearing up of mysteries and not by their perpetuation that knowledge grows. These mystery-mongers are arrant frauds, and stand in the way of civilisation. So far from being ashamed of their lack of perception they mawkishly sentimentalise over it; they make a virtue of mental indolence. The duty of the Classicist is plain. He must have done with these foolish notions, which lead to nothing but the grossest superstition. Artists have worked by candle-light too long. Falling in love with flickering shadows, they have mistaken meaningless accidental shapes for real æsthetic forms. They must abandon this emotionalism, and cultivate logic and the intellectual curiosity which does not rest until the obscurest matters have been made clear. It is time for them to pull up the blinds and let the day stream in." Such a critic cannot altogether be ignored. We may even agree with him to the extent of subscribing to the doctrine that every great artist is self-conscious and is aware of the effect he wishes to create and of the proper means of creating it. But just as a conjurer may deceive others without himself being deceived, so can the artist endow his buildings with the attribute of mystery by methods which are perfectly simple, straightforward, and capable of being reduced to a rule.

There is another objection which must be dealt with. The same critic who takes us to task for indulging in false sentiment may also accuse us of being guilty of the Ruskinian fallacy of supposing that a work of architecture can be expressive of abstract qualities which have nothing whatsoever to do with its utilitarian and social functions. He may tell us that a building can no more express mystery than it can express righteousness, justice, or truth. But the fact is that while the latter qualities cannot truly be denoted by spacial relations, and are thus totally outside the scope of architecture, mystery is a thing which can most readily be interpreted in terms of those relations. Whenever there is a room or object behind which we obtain a view, but only a partial view, of other rooms or objects, the idea of mystery has been introduced; in such an instance the picture suggests very much n
than it reveals. On the other hand, there are sc
which partake too much of the obvious; we sum t
up in a very short time and lose interest in them ju
quickly. As we look up towards the head of a va
where the mountains rise abruptly, forming a *cu*
sac, we feel uncomfortably hedged in, and our visio
vested with a finality which is not pleasing. Som
the most beautiful views which nature provides ar
be seen in places where several valleys converge
open out vistas into unknown regions.

The Gothic cathedrals have been justly extolled
the long avenues of arches which direct one's gl
ever onwards. The nave, aisles, and transepts
prise a composition which always seems to trans
one's immediate vision of it. This suggestion of al
illimitable space is present to an even greater de
in the ancient Egyptian temples. Here we have
great hall behind another; the spectator has to
ceed from chamber to chamber in order to reach
inner sanctuary, whose mysteriousness is in part du
this very inaccessibility.

These architectural configurations are distingui
by an agreeable complexity of subject, but such a
plexity is by no means incompatible with the
formal type of planning. A building that is too si
is in danger of becoming tedious. For instanc
square may often have the character of dul
because there are no openings by which our view n
be extended; it does not give us the requisite con
of planes. Not only the Egyptians, but the Ro
too, were aware of this, and arranged their cour
such a manner that none of them appeared t
entirely closed in. The west half of Piccadilly C
is one of the most interesting compositions in
world, because, in spite of the geometrical desig
the small quadrants to which the circus owes its
and cohesion, it is not entirely self-contained, but
vides us with several delightful vistas; and Traf
Square, with all its blemishes, is not without this
virtue. The quadrangles of Oxford and Camb
colleges have nearly all got arched portals thr
which we get fascinating glimpses of what lies be
This quality of mystery is essential to all large a
tectural schemes, whether they be in the Class
Mediæval styles, and even in the interior of a ho
must not be absent. A house which has a small sc
hall leading into all the rooms of the ground
storey, and a small square landing leading into a
rooms of the second storey, may be compact
exceedingly well arranged, but it is not satisfacto
every respect. The reason of this is not only ps
logical, but physiological. In the first place, the
is too obvious; the visitor enters the house and im
ately obtains an accurate knowledge of its
accommodation, and it becomes like those r
tedious human beings who have explained thems
completely, and from whom one has "nothing to
and nothing to fear." Secondly, if anyone is
pelled to remain in the hall for any length of tim
will experience a sense of fatigue, because his eye

lenied the relief they would obtain if they were
ved to dwell upon some more distant object. How
h more pleasant it is when such a hall or landing
an open doorway leading into a corridor! Com-
e formality of design is thus joined to variety of
pect; and there is just sufficient mystery to save
om the architectural platitude.

C. N.

The Labour Crisis.

AST Wednesday it became known that the
unionists' ballot on the peace proposals of the
joint conference was adverse to settlement, and
Thursday afternoon the figures were announced.
y are set forth, together with other details of
special interest and importance, on p. 400. This
dvised decision would have been deplorable
ugh if its effects had been confined to the area
he London dispute; but it assumes a still more
ter aspect. As the men were well aware while
were casting their votes, it brings down the
anche of a general lockout, with a tenfold exten-
of all the waste and misery of industrial warfare.
n the London unionists, therefore, must rest entire
onsibility for the grave consequences of their own
n rejecting the impartial and judicious recommen-
ons of the National Conciliation Board, as well as
ing their backs on the generous concessions prof-
d by the London Master Builders' Association.
en it is fully and generally realised, as immediately
ill be, that the unionists have deliberately and
bornly refused reasonable and honourable over-
s for peace, trade-unionism must fall into further
lic disrepute. It was seriously discredited when
unions callously acquiesced in the flagrant breaches
greement which gave rise to the trouble. Obdurate
sal to accept fair and reasonable terms of settlement
nates all public sympathy; and it would not be sur-
ing if, in the upshot, the groundless charge that the
loyers were "out to smash the unions" should
a sardonic sequel in the unions smashing them-
es. Ten days of grace were to precede the gene-
lockout, and there is just a remote chance that dur-
this interval some *modus vivendi* may be found;
obviously this hope is against all probability. It
ns that the disaster of a general lockout is upon us,
that the utmost that can now be done is to exhaust
legitimate means of minimising its evil effects and
rtening its duration.

Pious Memorials.

HE memory of a prominent French builder, M.
Lucien Soulé, has been honoured by a touchingly
beautiful ceremony which has taken place in the
etery of Père Lachaise. On the anniversary of M.
lé's death a bronze tablet was dedicated to his
nory, and to it a large assembly of his relatives,
nds, and former colleagues walked in procession
n the cemetery chapel, where a commemorative
gious service had been held. At the tomb an elo-
nt *éloge* was delivered by M. Van Ophem, who
lled the services to the building industry which M.
lé had rendered as founder and president of the
eration Internationale du Bâtiment et des Travaux
lics, and who testified to the respect and affection
ch M. Soulé's amiable and benevolent character had
rywhere inspired. The memorial, which consists
bronze tablet showing a medallion portrait of M.
lé, is the work of M. André Vermare, a winner of
Grand Prix de Rome, and was commissioned by
French National and International Federations.
king due allowance for differences in habit and tem-
ament, there still seems to be no special reason why
tender grace of this tribute should not touch the
ish builder to some sort of emulation. Fine cha-
er and signal service have been brought into play
prominence by professional and other organisations; but when a man who by his strenuous and self-sacrificing labours wins himself a high place in the esteem of his fellows it is seldom or never that any public memorial of his work and character is raised. A portrait in oils, immured in the semi-obscurity of some council-chamber or committee-room, represents, among architects and builders in this country, the utmost recognition that we seem prepared to accord to distinguished service. Surely the French, in raising so tastefully artistic a memorial, which, with its simple inscription, "A Lucien Soulé: l'Industrie du Bâtiment," can be known and read of all men, have shown us the better way. But if we must be more prosaic, if not more practical, why not let such memorials take the useful form of scholarships or pensions, perpetuating the names of our men of light and leading?

Misapplied Paint and Plaster.

ACCORDING to the modern conception of how it should be done, restoration nowadays often involves a good deal of destruction. A case in point is that of Bolling Hall, which has become the property of Bradford Corporation, and is to be converted into a sort of museum illustrative of the history of the city. A fourteenth-century tower is the most ancient part of a building upon which the Tudor, Jacobean, and Georgian periods have left their mark, as have also the occupants of the tenements into which the building has been of late years let off. Oak panelling and oak and stone mantlepieces have been found covered with paint, and a fine ceiling, with oak moulded beams and plaster panels, had been closed in by the insertion of a plain plaster ceiling eighteen inches below it. In attempting to account for these superfluities, it is not necessary to assume an absolute mania for paint and plaster. That universal love of change which M. Bergson has elevated into a system of philosophy favours paint as a facile medium for its gratification. One can get a new colour scheme with every spring cleaning; whereas oak panelling presents the same figure and pretty much the same tint from one generation to another, except that it is generally allowed to get deplorably dirty. To pay for having it cleaned seems to the ordinary person a preposterous expense, with little or nothing to show for it; might as well get something for your money, and something fresh and pretty to look at, by having paint laid on! One of the oak-panelled rooms at Bolling Hall had been actually painted over and oak-grained! As to the plastering-up of oak roof-beams, it may be imagined that to the average tenant a plain flat ceiling looks more homelike, and that the low ceiling seems more cosy than the lofty roof, besides being easier to clean and less costly to repair. This brief attempt to account for the Philistine view is not meant to condone it. On the contrary, we are delighted to hear that Bolling Hall is being freed from the devastating effects of misapplied paint and plaster; materials for which we confess the utmost respect where they are not abused.

The Institute's Registration Proposals.

THE discussion at the general meeting of the Royal Institute of Architects of Ireland on the Charter proposals of the R.I.B.A. disclosed anything but readiness to come into line with the policy of the latter body. One speaker said that the action of the British Institute from start to finish was not calculated to inspire confidence; another, that the scheme promised nothing but an inflated membership for the Institute, and there was no definite pledge to proceed with registration. The tone of the criticisms was somewhat lacking in graciousness, considering that the R.I.B.A. proposals are, as we pointed out in our leading article of a fortnight ago, purely tentative at present, and that every desire to be conciliatory was manifested by the Council; but no one can deny that on one point at any rate there are grounds for discontent. This is the very uncertain attitude of the R.I.B.A. Council in regard to ultimate statutory registration. In the debate Mr. Blomfield's statement on this matter was vague, to say the least of it. If it was found desirable to proceed with statutory registration his council would proceed with it. If the new Charter proved to be sufficient for their needs they would not do anything more. In effect, this declaration seems to prove that the R.I.B.A. Council has no policy at all with regard to what, in the opinion of large numbers of architects, is the logical and desired consequence of the Charter policy. Possibly the adjourned discussion which is to take place on June 8 will elicit a more satisfactory official statement. Otherwise we fear that the Irish malcontents will not be the only ones when the final tussle over the Charter proposals takes place.

The End of 75, Dean Street.

THE Select Committee of the House of Lords having refused to confirm the preservation order for this house, it is now almost certain to be demolished. The bill to confirm the order was opposed by Mr. Mulliner, the owner of the house, who explained that it would involve him in serious loss, as he had spent over £13,000 in purchasing and restoring it; moreover, he had agreed last December to grant a building lease of the site for ninety-nine years. He denied that there was any evidence that Thornhill and Hogarth had ever lived in the house, or that it was worthy of preservation as a national monument. Against this Mr. Leonard Earle (Secretary of the Office of Works), Sir Edward Poynter, Sir Charles Holroyd, Mr. Sargant, and Sir Cecil Smith testified to the historic and artistic interest of the dwelling—but all to no purpose. The Commissioners of Works therefore will pay Mr. Mulliner's costs in the action, Mr. Mulliner will lease the site, and the house will come down; and thus ends a quite historic agitation.

Compulsory Town Planning.

SPEAKING at the Imperial Health Congress at South Kensington, Mr. Herbert Samuel divulged the interesting information that Parliament is to be asked "to decide that town-planning should not merely be limited to those localities in which there happens to be an enlightened and progressive town council," adding that "the powers of the Town Planning Act should be extended universally, and any authority which neglected to avail itself of its powers should be regarded as not performing efficiently its functions of local government, and steps should be taken in respect of that authority accordingly." That is a quite delightfully frank declaration of policy, but contains no other element of surprise. Town-planning is as proper a subject for compulsion as any other in which, for the general good, it becomes necessary to deal with instances of obstinate obstruction.

Street Refuges and Subways.

MANY articles and much correspondence on the dangers of the streets have left the problem pretty much where it stood before, but have at least served a useful purpose in expressing the general and insistent demand for remedy. Street refuges are better than nothing, although the common sight of nervous persons making a frantic dash for them, and, having chanced to reach them, standing thereon in something of the desperate plight of the marooned, does not inspire much confidence in the efficacy of the island: which, moreover, is often so narrow as to possess specific dangers of its own. Police statistics for 1912 (the latest available) show that in Highgate 1,115 persons were injured in the streets and 34 were killed; in Hammersmith, 1,023 were injured and 31 ki and in the Swiss Cottage area 908 were injured ar killed. It is an appalling price to pay for "impro means of locomotion. Subways, valuable as undoubtedly are, fall so far short of a satisfactory tion of the problem, are so costly, and are so ut destitute of architectural treatment, that one hesi to recommend their multiplication. But though energetic, and such as, being able-bodied and rather revel in the risks of dodging the t commonly disdain to use them, subways are ar doubted boon to the infirm and the nervous, therefore should be constructed at all points w busy streets intersect. Subways are badly need Charing Cross, and, as someone has suggested, n well form part of the Mall Improvement Scheme the approaches to them should be made architectu an achievement never yet attempted.

THE PLATES.

OUR Plates this week are of miscellaneous int Their subjects, as will be seen, are conce with details of interest to architects rather with finished buildings, and as such they prese wide enough variety. First on the list comes the beautiful specimen of current ecclesiastical work:

Altar in St. Pancras Church, London. H. F Adams and Charles Holden, F. and A.R.I. Architects. This altar is of Coromandel ebony Italian walnut, with metal enrichments, and was by Messrs. Howard, of Berners Street, London. cross, the altar rails and gates, and the metal wo the altar itself, were carried out by the Birming Guild, Limited. The apse is lined with ma the retable, of the same material, was carried o Messrs. Burke, of Berners Street. The whole was made from the designs of the architects.

Our series of Late Georgian Houses is conti with a

Farm House at Cobham, Surrey. The ori building was probably a small symmetrical hous wing on the right-hand side being a subsequent tion. The front fence on the low parapet wall is cal of the period.

We have already published two examples of a series of Vases, both of which belonged to the e the nineteenth century. The

Empire Vase in the Grand Trianon, Versa takes us back to an earlier period. The lines o design are extremely graceful, and the work illust the better phase of a Classic fashion which during period in France sometimes degenerated into ness—more particularly in regard to costume.

Our fourth plate is a Student's Drawing: *Desig a Monumental Fireplace. By J. Burford.* Mr. ford is a student at the Architectural Associa School, and this design was one of the Testimon Study approved at the March examination at R.I.B.A.

The eighth and last stage of our *Chart of Planning Procedure for Local Authorities' Sc* constitutes our next plate. Next week we shall lish Stage I. of a Chart for Owners' Schemes ad by Local Authorities, together with an introdu article. This chart will be issued by stages, wee week, in the same way as its predecessor. In P we resume our series of Cottingham's Designs, *Bronze Stands for Lamps, Gas Lights, etc.* Working Drawing: *National Museum of W Cathays Park, Cardiff: Details of Court- Staircase. Smith and Brewer, FF.R.I.B.A., A tects*, is one of a famous set of 140 sheets, made o American system, several of which have already published in the Journal. They are interesting n in subject than in treatment.

HERE AND THERE.

two preceding issues I have dealt at some length vith the construction and decoration of the Crystal ?alace. There only remains now for me to give estimate of the building as a whole, in view of h formidable task I may be permitted to express et at the piecemeal fashion in which the fire of did its work; only the north transept, with the ssi of Aboo Simbel and the menagerie, were then royed, leaving an odour of calcined plaster and monkey that hung about the district for months wards, and, of far greater account, leaving the of this Mid-Victorian achievement for our nanent disquietude. If only the whole thing had swept away, as the Tuileries were, what a lot of ole we should have been spared! No one would have been able to confront us with IT, the supreme nple of a truly modern architecture. But ours was happy fate, and the Crystal Palace still dominates enham Hill. Have not thousands of pounds collected from the public to save the place from speculating builder, and is there not at the present a Bill before Parliament to give effect to all this ic-spiritedness? Let us hope, at least, that when Local Authority assume control they will deal the Crystal Palace and its grounds in something le large-hearted way its authors displayed. It was nmense initial success for those chiefly responsible. Paxton, Mr. Charles Fox, Mr. Cubitt, all were hted, and glory shone about lesser men who had connected with the enterprise. To-day, however, glamour has passed away, and all the wiles of the al Authority will be needed to cajole the place into sort of attractiveness. But what shall be said of way of commendation or apology? I have looked anxiously, seeking to find that hidden merit which architectural seer may perchance divine, for we ever putting on the clock, and the despised of erday becomes the approved of to-morrow. With possible good will, however, I can find little to ire in the Crystal Palace. Long ago Fergusson that "the ever-complaisant Cockerell, a man of cely mind as of princely presence, whose failings ys leaned to virtue's side, in his desire to speak of it could only suggest that it had merits of pro- ion due to being planned on 'the multiple ciple' which he was glad to think had the authority William of Wykeham in its favour." There is, it is some rhythm in its repetition of parts, and I will gainsay that there is a certain solid slabbiness it the structure from some points of view; but, n all is said, it remains a dull mechanical thing, whatever merit can be discovered in it must be d entirely on the outside. Within, it is a colossal tre. The great length affords a mildly impres- vista, but the interior is as devoid of all effects of ting as any conservatory, while the interlacing ers and bracing stays produce an appearance of r confusion. The redeeming feature of the whole e is the great scale on which it has been laid out. re is nothing niggardly about the Crystal Palace s grounds. But even great size will not cover a itude of sins; and thereby hangs the problem.

* * * *

the course of the paper which he read at the itute the other night Mr. Raffles Davison made suggestions for "beautifying" London which occasion for a difference of opinion. There was, articular, a scheme for Whitehall, whereby a broad ement planted with trees was to run down the re of the thoroughfare. Mr. Davison's perspec- s are remarkable for the accuracy with which they esent projected schemes, and we may take it, efore, that his drawing of the Whitehall project s a very true idea of the shady walk where the citizen, after a crossing involving all the present perils of a busy London street, might stroll leisurely along, admiring here the Admiralty, there the Banqueting House, and, further south, the A.B.C. It would seem as though Mr. Davison shared the Carpenter's lament and wept to see such quantities of road. But I, for one, much prefer the present Whitehall to a Whitehall with a pleached alley running down the middle of it. A few lead figures on pedestals, a few little pools, and a generous supply of flowers in green tubs, and the jaded visitor might shut one eye and imagine himself in Arcady.

* * * *

It is desperate work trying to come to a conclusion over anything connected with art. Internal peace reigns only among those circles where small bands of enthusiasts agree to assault everything that does not answer to their own particular touchstone. And it is surprising how even those who we have regarded as above suspicion sometimes show signs of falling away from the standard. Ruskin, for instance, has been regarded by latter-day architects as an arch-enemy, because, through the medium of his wonderful rhetoric, he led the public to imagine that the part was greater than the whole, that sculpture was of more account than architecture—or "mere building"—and that the forms of architecture were as nothing in comparison with the spirit that should animate them. Mr. Blomfield, among architects, has done a good deal by way of onslaught on that position, and we can be sure of him at least as a stalwart. But Professor Lethaby raises a doubt in the mind. He is, perhaps, the most erudite and individual writer on architecture whom we have, and he surprises us at many a turn. But not many, I think, were prepared for the admission he made in this journal some time ago, that he smiled on Ruskinism, observing that Ruskin was now nearly old-fashioned enough to be in vogue again—"and I am almost ashamed to begin mentioning him again to a world which has changed his lamps for new ones." It is a sad admission. Who will be the next to go? Shall we have Mr. March Phillipps uttering a panegyric on Cockerell, and Professor Reilly laying a Gothic wreath on the tomb of Butterfield? That seems unlikely enough, but, as William says in Mr. Bernard Shaw's play, "You never can tell."

* * * *

While, however, it is generally agreed that Ruskin had a wrong conception of architecture, let us never forget his magnificent talent as an imaginative writer. Take, for instance, the following estimate of Byzantine architecture from "The Lamp of Power": ". . . all these mark, for a great and honoured law, that diffusion of light for which the Byzantine ornaments were designed; and show us that those builders had truer sympathy with what God made majestic than the self-contemplating and self-contented Greek. I know that they are barbaric in comparison; but there is a power in their barbarism of sterner tone, a power not sophistic nor penetrative, but embracing and mysterious; a power faithful more than thoughtful, which conceived and felt more than it created; a power that neither comprehended nor ruled itself, but worked and wandered as it listed, like mountain streams and winds; and which could not rest in the expression or seizure of finite form. It could not bury itself in acanthus leaves. Its imagery was taken from the shadows of the storms and hills, and had fellowship with the night and day of the earth itself." That is literature, and though the author, in his later annotations, said that the bit about self-contented Greeks must be omitted, the whole passage should serve to remind us that Ruskin was the most eloquent writer on architecture we ever have had.

UBIQUE.

MODERN ARCHITECTS:—III. SIR ROBERT SMIRKE.

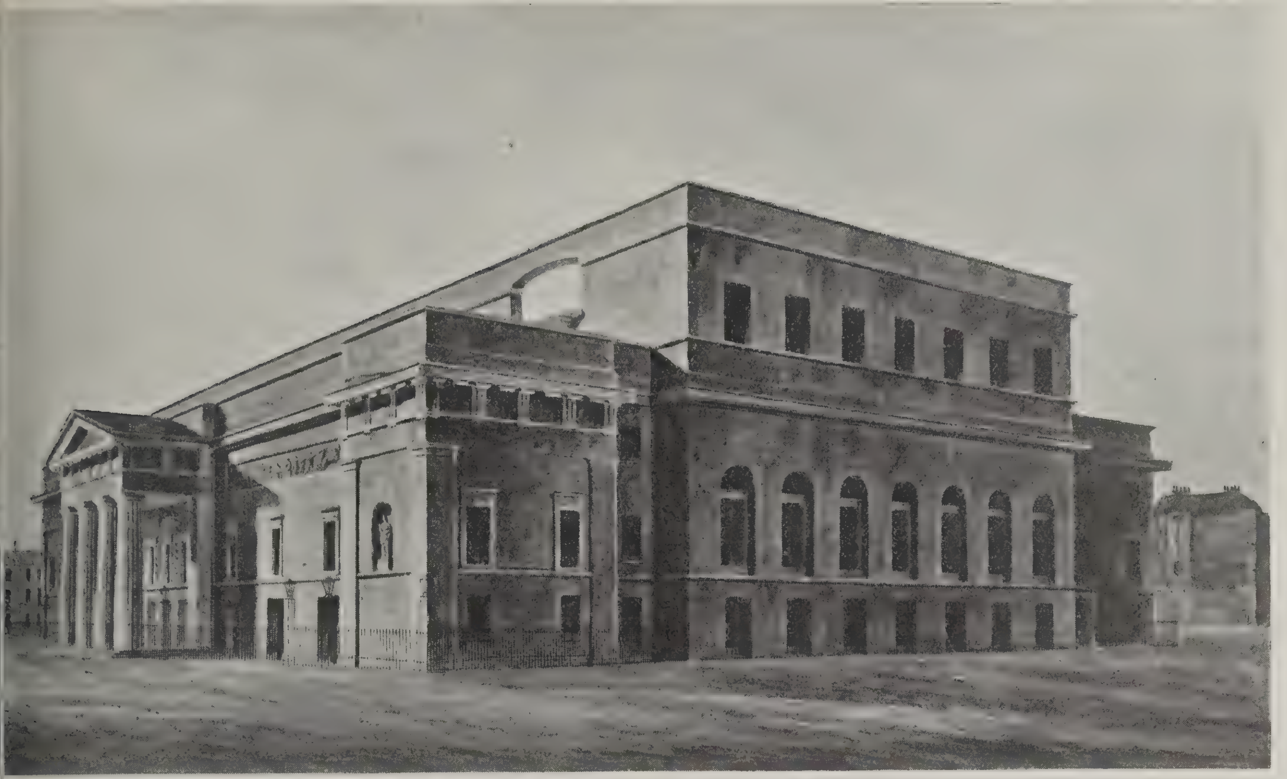
SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

(*Continued from* p. 371.)

ONE of the best and most characteristic buildings of Sir Robert Smirke was his Covent Garden Theatre, which was burnt down in 1853. This, like the British Museum, must be considered a work of architecture of the first rank, and it is all the more noteworthy in that its excellences are not due to any profusion or delicacy of detail. Although the interior is richly ornamented, the outside is almost plain. Even the windows, with the exception of a few of those in the front façade, are neither marked by architraves nor by any columnar treatment, but are just rectangular or arched holes in the walls. There is no evidence that this restraint was determined by motives of economy, for the theatre was sumptuously fitted out and no expense was spared to make it a worthy home of the drama. Smirke seems to have been actuated by the desire to design a structure which should make its appeal by composition alone; in most instances such a course would have resulted in disaster, for when the elements of composition are simple and obvious decoration becomes necessary in order to give to the fabric the requisite interest. Here, the problem was so difficult, the solution so convincing, but yet obtained by such subtle methods, that the building, although devoid of embellishment, strikes one immediately as a very triumph of artistic skill.

Let us consider the difficulties which Smirke had to surmount. In the first place, there was the site, which was by no means the ideal site for a theatre. The peculiarity about a theatre is that it has a front, but not necessarily any sides or back that are visible; and it has an elevated portion at the rear, which is used for the manipulation of stage scenery. There is no need however, for a similar elevated portion in the front. Hence the view of the flank of the ordinary theatre is very much lop-sided. In most sites this does not matter. Either the flanks are hidden, as they are in the Haymarket Theatre, and in nine theatres out of ten, and the architect has only to consider the design of an elegant front façade; or else they are exposed, as at the Opera House in Paris. But here the lack of symmetry is a virtue rather than a blemish, for the chief façade is confronted with a concourse of avenues leading up to it, while the back has no such outlook, but is adjacent to other structures. Hence, the flat dome in front of the pediment is an admirable arrangement. If the flanks had been symmetrical in such a case as this a grave error would have been committed, for such symmetry might have suggested a further symmetry upon each side of it, whereas the aspects of the back and front were widely differentiated from each other. Take the Odéon Theatre, which is on an island site. This also presented no great difficulty, as the disparity between the two ends is perfectly justified, for there is a similar disparity in the architectural configurations upon which they abut. Smirke, however, was asked to place his building in the midst of an immense rectangular place, no side of which was more important than any other side, and which was lined by buildings pretty much of the same height and value. If his theatre was to have a "back," there was no reason why it should turn its back towards one direction rather than towards any other, and there was obviously a strong objection to destroying the whole balance of the rectangular place by putting in it a dominating central feature which was painfully lop-sided. So he was led by considerations of æsthetic propriety to design symmetrical flanks for this theatre. He accomplished this by making both front and rear the same height, and by connecting them by means of a wall, which frankly declares itself to be a joining member, for it is punctuated with arches. At the springing of each arch
is a moulded string-course, which continues aroun
attic storeys at each end. This arcade at the su
of the building is a most interesting feature, extre
simple and yet perfectly adequate for its purpose
successfully unites the two end features, but the
nothing fraudulent about it, for it makes no preten
being a solid part of the structure, with rooms be
it. The rear elevation is in some ways cleverer tha
front. Here the main part of the façade consists
basement storey, a principal storey having tall a
windows, and an attic, recessed behind which w
the punctuated wall mentioned above. Variet
obtained by narrow projections of a slightly diff
fenestration from that of the main part of the fa
for instead of the tall arched window they have
smaller ones. Such entrances as are necessar
kept low and are not allowed to interrupt the rh
of the row of windows above them.

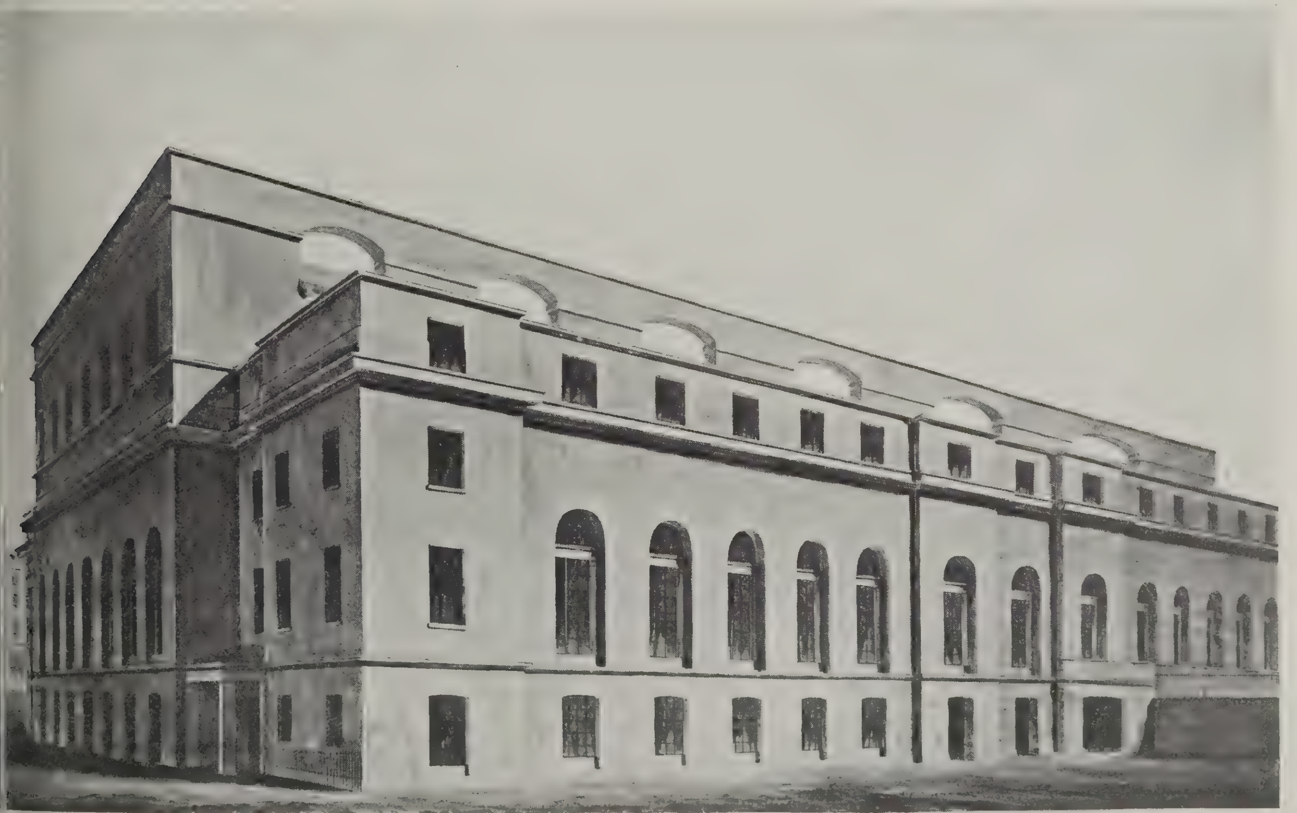
The front elevation is of a comparatively co
tional character. The Temple of Minerva o
Acropolis at Athens suggested the design fo
portico. The principal front in Bow Street mea
220 ft. from one extremity to the other: the
Street front and its parallel (which was approache
piazzas from Bow Street and Covent Garden) are
178 ft. long. The whole front was enclosed with
rail work, and the upper part is decorated by b
rilievo representations of the Drama, ancient
modern, which are sculptured in long panels sepa
by the portico. The views here given were pre
by Soane or his pupils, as illustrations for his Aca
lectures, and they have been reproduced by the
permission of Mr. Walter L. Spiers, the Curator
Soane Museum, Lincoln's Inn Fields. It appears
Soane took the trouble to have these pictures ma
order that he might have the pleasure of criticisin
design of the theatre. In excusing himself fo
apparent breach of professional etiquette in critic
the work of a contemporary at a public lecture he
"It is extremely painful to me to be obliged to re
modern works, but if improper models, which be
more dangerous in being constantly before us
suffered from false delicacy or other motives to
unnoticed they become familiar, and the task I
undertaken would be not only neglected, but the
of the Professor as pointed out by the laws o
Institution becomes a dead letter, for the Profess
Architecture is directed to read annually six p
lectures calculated to form the taste of the studen
instruct them in the laws and principles of com
tion, to point out to them the beauties or faults of
brated productions, to fit them for an unpreju
study of books on the art, and for a critical exa
tion of structures." He objected that the Orde
not carried right round the building and stops sh
the portico and the two projecting wings. It wou
interesting to hear what comment, if any, S
would have made upon this statement of the age
John Soane, whose pupil he had once been. Th
no evidence of his having made any public reply.
must have recognised that there was a certain ele
of justice in the criticism, for the front façade cert
differs somewhat in character from the others. O
other hand, there is no need for a whole building
distinguished by a columnar treatment merely be
a portico is employed. The criticism must rath
directed to the extremities of the façade, wher
columns are gratuitously introduced; and exce
might also be taken to the architraves round the
dows, which are out of keeping with the severe st



COVENT GARDEN THEATRE, LONDON: FRONT VIEW. SIR ROBERT SMIRKE, R.A., ARCHITECT.

ration which prevails in the remaining sides of
eatre. However, these are but slight blemishes,
hey cannot prevent us from finding pleasure in
is otherwise a most notable architectural com-
on.

nsulting the plan we see that the form of the
ory is that of a horseshoe. The width at the
mities is 51 ft., and the depth from the lights to
ont of the boxes is 52 ft. There were three tiers
xes, each containing 26. and 7 boxes on each side
them and parallel to the lower gallery. To the
pal private boxes were attached private rooms
with fireplaces. It may be of interest if we quote here a short extract from Britton and Pugin's "Annals of London," which gives some idea of the interior of the theatre: "The appearance of the house is very imposing. The colour is a subdued yellow, relieved by white and superbly enriched with gilding. Around the dress circle are wreaths inclosing the Rose of England in burnished gold; the first circle displays the Thistle of Scotland, and the second circle the Shamrock of Ireland. These three emblems are alternately placed with fancy devices in rich borderings in every part of the auditory; which from the reflection of the light



COVENT GARDEN THEATRE, LONDON: REAR VIEW. SIR ROBERT SMIRKE, R.A., ARCHITECT.

gratifies the prevalent taste for splendour with one blaze of effulgence. The back and sides of the pit are decorated by the representation of dark crimson drapery, as are the interiors of all the boxes, which produces a very effective contrast to the brilliancy of the front. The boxes are supported by small iron columns fluted and gilt. The ceiling over what are called the slip boxes exhibits panels of blue relieved by white and enriched with gold. The middle part of the ceiling is circular, in the centre of which from a richly gilded glory surrounding a circle of golden lyres is suspended a chandelier of glass of the most superb description, illuminated by two circles of gas lights; the remainder of the ceiling is a light blue sky relieved by delicate white clouding. The cove of the proscenium in the segment of a circle contains the moiety of a rich gilded glory, and sky to match the ceiling surrounded by a bordering of gold, in which, as well as round the ceiling, fancy flowers are introduced. The proscenium is supported by four pilasters painted to imitate Sienna marble. The top of the proscenium from which the curtain descends is an arch of about 38 feet wide and 3 feet deep, surmounting a superb drapery border of crimson, white, and gold, elegantly disposed upon a transverse bar of gold, terminated on each side with a lion's head; in the centre of this drapery is the King's crest."

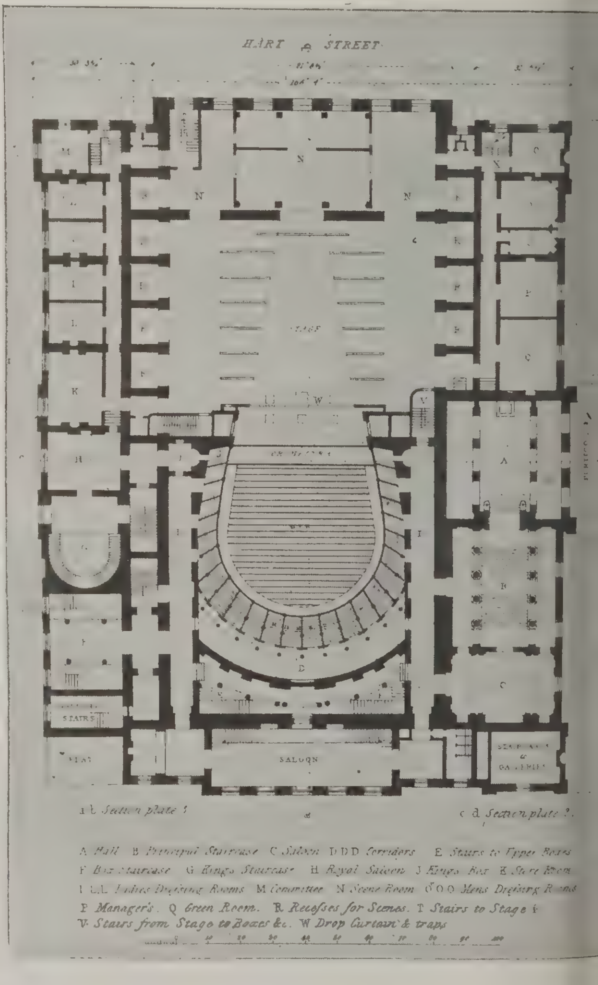
The grand staircase is one of the best examples of Smirke's treatment of such a feature. The segmental ceiling is supported by four great Ionic columns, between which Greek lamps are suspended. In this instance he was given room to indulge in that rare architectural luxury—long flights of steps, which, instead of suddenly bending backwards, lead straight on and provide an agreeable vista.

The British Museum is so well known that description of it is quite needless. The octastyle portico, with its double range of columns, is one of the finest in the kingdom. It would be difficult to find any fault with the design of the front; the entrance court is admirably arranged, and the patches of bright green lawn enclosed within heavy stone curbs give the requisite note of colour and freshness without detracting from the austerity of the composition. The residential blocks upon each side add greatly to the dignity of the approach.

The galleries are models of what museum galleries should be. The walls, either plain or decorated with pilasters, form an admirable background for the exhibits; the flat, coffered ceilings are just sufficiently interesting without being obtrusive; this result is obtained by an exquisite colour treatment, the coffers being delicately tinted in blue, red, yellow, and gold. The detail is of the conventional Greek pattern, and does not call for much comment, except that Greek ornament, when used in the manner in which Smirke uses it, seems peculiarly fitted to be the embellishment of a great public building.

Another great design, that of the old General Post Office, stands to Smirke's credit. It is also a simple composition, consisting of a pedimented central feature, which is balanced at the extremity by two slight projections. King's College closely resembles this, for it consists of the same general disposition of parts. The stately entrance hall of this building is well worthy of study. His alterations to the Mint improved it greatly; he placed his gateways and entrance pylons in such a way that the pediment of the building behind was not obscured by them, and it was a brilliant idea to place a deep pool of water between the pylons, and to have a row of railings on each side of it. The idea of defence could not have received more complete architectural expression. The Mint itself is somewhat lacking in character, but the appendages which he introduced do much to repair the deficiency.

Of Smirke's clubs, the Union Club, Trafalgar Square, may be considered a good example. It may be noted that the attic was added by another hand, the alteration was effected with considerable skill. club, originally the College of Physicians, consiste two storeys and a low basement. The Ionic ord employed, and at the end facing the National Gal there is a portico. The note of domesticity is maintained, partly by the smallness and seeming u portance of the doorway, by the elegant balconies, by the windows, which are treated in a somewhat cate manner, some of them being sub-divided pilasters of very narrow proportion. This shows although Smirke had a predilection for the somev heavy type of architecture that is suitable for pu buildings, he could upon occasion employ a lig touch. But every work of Smirke, whether it domestic or otherwise, is characterised by a cer sense of grandeur. A fine scale is always maintai Although his buildings are never spectacular in vulgar sense of the word, they are all designed to public spectacles, for they are the expression of a g public spirit, the identical spirit which animated noble architects of the Periclean period. Sir Ro Smirke was one of the most illustrious figures of Greek Revival. He was one of th se intensely caut men who, although they may advance slowly, ne need to retrace their steps. Although not given to sational methods of propagandas, he was yet a pov ful advocate, for he identified the cause of Classic with that of common sense. Attempting far less t either Soane or Alexander Thomson, he achieved more. His work was not one of exploration, but of consolidation. He took the well-known elem of the Classic style, both the decorative motifs also the large architectural features, and did much convince the average Englishman that they could used with propriety in his own land.


HART STREET
N
N
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STAIRS
SALOON
STAIRCASE & GALLERIES
a b Section plate 1
c d Section plate 2.
A Hall B Principal Staircase C Saloon D D D Corridors E Stairs to Upper Boxes
F Box Staircase G Kings Staircase H Royal Saloon J Kings Box K Store Room
L L L Ladies Dressing Rooms M Committee N Scene Room O O O Mens Dressing Rooms
P Managers Q Green Room R Recesses for Scenes T Stairs to Stage
V Stairs from Stage to Boxes &c. W Drop Curtain & traps
10 20 30 40 50 60 70 80 90 100

COVENT GARDEN THEATRE, LONDON: GROUND FLO PLAN. SIR ROBERT SMIRKE, R.A., ARCHITECT.

CORRESPONDENCE.

litors disclaim all responsibility for the statements made or opinions d by correspondents, who are asked to be brief, and to write on one side only of the paper.

The Royal High School, Edinburgh.

e *Editors of* THE ARCHITECTS' AND BUILDERS' JOURNAL.

rs,—Mr. A. Trystan Edwards's splendid series of es on “ Modern Architects ” I had read until last with unalloyed enjoyment. They were, I ght, masterpieces of architectural criticism—arly, penetrating, soundly philosophical, sweetly nable. Now he has fallen suddenly and pre- tely from his high estate. On page 369 of your for May 27, he has dared to speak slightingly of High School, Edinburgh,” meaning, I presume, oyal High School.

he British Museum,” he says, “ is of especial st in that it is an example of the appropriate use e heaviest and most ponderous form of Classic tecture. Only a few buildings, and the most rtant ones, are worthy of such a treatment. It is cture such as the High School, Edinburgh, which s this style into disrepute. If buildings of com- ively such small account as that are allowed to the character of a great monument, it becomes y impossible to give sufficient artistic emphasis se which have some public function to perform.”

aviness and ponderousness may be separate and ct merits in a building; and the expression viest and most ponderous ” may involve shades of ing so subtle that they elude me, and, pending an nation, I take it that the author has simply lapsed autology.

t why is it held that the Royal High School has ht the heaviest and most ponderous form of ic architecture into disrepute? The school is a copy of a Greek temple. Is there any Greek e of which it can be said justly that it represents heaviest and most ponderous form of Classic ecture ”? Alternatively, how can a high school as educated royal princes, as well as some of the est men that Scotland has produced, bring the viest and most ponderous form of Classic archi- e ” into disrepute? If this augmented or redu- ed ponderosity is to be considered as the close rve of purely national institutions, I shall take to suggest that the Royal High School comes he category—that it is by no means “ of com- ively small account,” but that, founded in the enth century, it is, by its history and standing, y the regard in which it is held by Scotsmen, onal institution, second in importance to none in ingdom—certainly not inferior in dignity to a museum. Noble itself in its objects, its achieve- , and its associations, it cannot bring noble archi- e into disrepute. Nor can I admit that it is heavy or ponderous—still less that it is both, gh it certainly shows a Classical severity that architects would regard as being appropriate to its high calling and to its situation on the brow lton Hill.

r author has done the Royal High School a three- njustice. The institution is not of small account, not ponderous, and in no respect does it bring ecture into disrepute.

SCOTSMAN.

will not labour my defence of the expression viest and most ponderous form of Classic archi- e.” Suffice it to say that every word of Latin ation has a different meaning from that of its st English equivalent. Heaviness is generally ned in terms of avoirdupois, whereas the word rous has a spiritual signification and suggests sumption of dignity. A man of immense bulk can have a sprightly manner, and, on the other hand, a most diminutive person can be extremely ponderous. But when a man of immense bulk chooses to be ponderous as well the result is overwhelming. The case of buildings is similar. Some structures not only have great mass, but the disposition of their parts is such that they present an aspect of supreme dignity. I am willing to be somewhat overawed by the British Museum, but I cannot feel an equal reverence for even the most aristocratic High School, Scotch or otherwise. If the high school had been composed of large blocks of masonry it would have appeared heavy and nobody could have had much cause for complaint: if some colonnades, even of moderate size, had been introduced it would have appeared ponderous. But that it should be both heavy and ponderous, that it should flaunt before our faces an array of Titanic columns is the greatest presumption. It is not worthy of such architectural majesty.—A. T. E.]

Proposed Charter, R.I.B.A.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—In your last issue we notice a letter from “ The Worm that Turned,” and should like to take this opportunity of informing him that he is not the only Licentiate who has felt the great injustice of the proposals in question.

For some weeks we have been in correspondence with the Institute over this particular matter, and a letter signed by us on behalf of the Sheffield Licentiates was sent up to be read at the special general meeting of April 27.

We have since been informed that it was found to be “ out of order ” to read such a letter *from Licentiates*, and we must therefore infer that the Clause was voted upon with the majority of those present ignorant of our protest.

Such procedure may have been within “ the letter ” of the Charter, but it shows the amount of consideration we may expect from our governing body.

If “ The Worm that Turned ” and any other Licentiates who feel that our interests should be protected will communicate with the undersigned, we may be able by combined action to convince the R.I.B.A. Council of our sincerity.

F. HOULTON WRENCH
(Chairman of Sheffield Meeting).
Upperthorpe, Sheffield.
FRANCIS A. WINDER, F.S.I.,
Secretary, Corn Exchange Chambers, Wharf Street, Sheffield.

SIRS,—The “ humorous exaggeration ” signed by “ The Worm that Turned ” which you publish this week has behind it real seriousness which I venture to think is shared by a large number of Licentiates. No doubt many others like myself, when invited by the Institute to join the new class of members (?), did so, even under all the conditions laid down, with some idea of being proud of the Licentiateship. Under the indignities and uncalled-for reminders of our inferiorities by the Institution, I am becoming somewhat ashamed of the distinction.

According to the recent report of the practice committee they are again about gratuitously to insult in the Journal, by conspicuous notices, the whole of the Licentiates who have honourably kept to the declaration made regarding the use of the title “ Licentiate R.I.B.A.” Surely a direct notice to such as do offend would be sufficient.

At least one allied society has also added its share of humiliating treatment. Notices to its members are addressed on printed gummed slips, and bear the abbreviation L.R.I.B.A., but for some time past they have had “ Licentiate ” written in pencil over the L, so that now all who run may read. DISGUSTED.

THE EXPRESSION OF FORM.*

BY LESLIE WILKINSON, A.R.I.B.A., ASSISTANT PROFESSOR OF ARCHITECTURE, LONDON UNIVERSITY.

MR. WILKINSON remarked at the outset of his lecture that architectural drawing was sometimes slightingly referred to as something half-way between the methods of the engineer and the painter. He preferred to see in it the combination of the merits of each. After classifying drawings as (1) those which are instructive to the author; (2) those which are instructive to the reader, and (3) those which are a delight to the beholder, the lecturer proceeded:

First, then, as to the educational value of drawing. That drawing teaches us to see will be acknowledged, that is why we sketch and measure, isn't it? The resulting production and the delectation of our cousins and out aunts is quite a secondary consideration. Now, if we find that we see a great deal more in a building if we sketch it than if we merely look at it, and as after a time this habit no doubt develops our sense of observation, surely this desirable result would also be produced in the public were they instructed in drawing. And where is the difficulty in this?

Drawing is a much older art than writing, and perhaps were I an Irishman I might say that the earliest writing was drawing. Then I suppose it was found that whilst drawing excellently expressed ideas of form it was deficient in expressing abstract ideas, and so writing was invented and ousted the practice of drawing.

Drawing is not only a means of artistic culture, *i.e.*, a thing desirable in itself, but a means to an end, a helpful instrument in the study of almost any subject dealt with by master and student. Draughtsmanship, like language, is useful for something else than the expression and communication of ideas. It is of great assistance in forming them, just as writing is a great help in sustained thinking. Writing serves not only to define our ideas but to fix them.

Alternatives.

The only alternative to drawing as a means of expression of form is of course writing, but except in the case of very simple and commonplace forms, this is apt to be clumsy and is seldom perfectly clear. The vivid pictures composed by our great poets and writers, Tennyson's "Palace of Art" for instance, are marvels of literary skill; but does not their success as descriptions depend on familiarity with scenes similar to those referred to? A verbal description of an original form is generally clumsy.

I was going to mention models as a means of expressing form, but I think we must rule them out as being rather realisations in miniature. But their value for purposes of study and explanation is unrivalled, and were it not for their expense I suppose they would be much more widely used than they are.

Photography.

What is it that gives the art of drawing its value? To my mind the production of a drawing means the knowledge of tangible facts. We cannot express a thing until we know what it is. A great draughtsman will be so, not because he commands a skilful technique, has a fine sense for line, colour and composition, so much as because he *knows* the form he deals with. Of lesser lights, some can draw the figure, some animals, some landscapes, some flowers and eatables, and some of us walls with doors and windows in them, but each his special subject only. All are draughtsmen and all can draw, but their failure in other subjects results from lack of knowledge, gained by observation crystallised by the habit of drawing.

When we say that the figure is the most difficult subject to draw, I maintain that we mean that the greatest knowledge is required to delineate the subtle contour of form of the most wonderful of all creations, the human form.

I think we should devote more time to the serious study of figure drawing and landscape composition. The latter is the setting, and the former the adornment and completion of our works.

The second group of drawings, *i.e.*, those instructive to the reader, includes working drawings, record drawings, and restorations (these latter also satisfying the condition for inclusion in group I. as eminently instructive to the author also). The mention of working drawings calls for a reference to Graphics. This most useful application of drawing to the solution of very practical problems is of course appreciated by the engineer and architect. With the diagram errors are less likely and results more obvious than can ever be the case with mere symbols. It may be said that Graphics deal with the expression of forces and numbers rather than form, but as in Graphics forces and numbers are as it were given form so that their functions may be more obvious, I have ventured to refer to the subject.

Of drawings in the third group, *i.e*, those which give pleasure by their intrinsic merits, apart from any question of association, it may be said that they are the result of absolute knowledge assisted by skill in "indication." The most advanced types of these are based on a close study of the effects of forms under varying conditions of lighting, movement and atmosphere. A lot may be learnt from the study of the works of acknowledged masters, and for contemporary work the R.A., the National Gallery, South Kensington, etc., offer opportunities, while the names of Canaletto, Du Cerceau, Hollar, Piranesi, Turner, Adam, Prout, David Roberts, Nash, Flockhart, Rickards, Adshead, and Walcot among others, will recall to you works which in a marked degree intensively possess the power of satisfying and pleasing.

With the Renaissance, drawing became of paramount importance. The introduction of the new manner, in the north-west of Europe, at any rate, depended almost entirely on graphic representations, the inadequacy of which in many cases led to the perpetration of unlovely compositions, which we know as Elizabethan and Jacobean, and which some men unaccountably feigning extraordinary ignorance would imitate to-day.

From this time to the present day, drawing became of more and more importance, until to-day all the components of a great building may be in preparation in various places at the same time, and the whole assembled with record speed, the accurate relation of the parts being assured by the services of draughtsmanship.

Granted that drawings are now indispensable, let us see what the effect has been on architecture. Has this effect always been beneficial? Planning, as now ur stood with all its means, could not of cc be effected without small scale draw but has not its effect on elevational de been unfortunate in some cases?

Look at the work produced in resp to the demand created by the indus revolution of last century, and compo our prosperous but unlovely Midland Northern cities.

The engineer is parted from the a tect, and takes with him the life-gi element of adventure, and with it n precision in draughtsmanship. draughtsman, born and bred in the na artificiality of a new-made town, bro up, I will not say trained, at the draw board, produces out of his own inner sciousness (a receptacle which has n been filled) the drawings for the build which we know only too well. These often conveniently devised with exce workmanship on good material, ful drawing, but innocent of any claims t considered as architecture. Again, t men at the boards must have originate ugly and elaborate ways of carrying simple details which have become stock-in-trade of the artisan to-day. they had only spent a few days in nearest village and then given a minutes' verbal instruction or der stration to the workmen, how much b a lot of this work might have been.

Once the Renaissance was establis it seems that elaborately detailed draw became unnecessary, and the work could be trusted to produce the verna seventeenth and eighteenth century w of which the charm is now generally mitted, and of which the Amer Colonists made such good use. But the nineteenth century, with its cha matters artistic, the luckless work found himself called upon to execute in the manner of half a dozen centurie many countries, in as many days. most precise information in the for drawings became necessary, and has tinued so ever since.

Technique and the Machinery of Drawing.

In addition to mere manual skill the duction of an architectural drawing, in manner, of course necessitates a thor knowledge of materials, the forms w the draughtsman expresses being d mined not by caprice, but by the funct of parts and properties of mater although these are secondary to the q tion of expressiveness of form. In the of decorative materials, the necessity beauty of form decreases as their de tive value increases.

The value of line in any type of dra can hardly be exaggerated, but its use a should be reserved for working draw (which, by the by, we may flatter ours have attained a degree of excellenc recent years, and even show signs of b carried too far). Although the deli line perspectives which we associate Letarouilly and his contemporaries, which the effect of distance is increase the thinning of the receding lines, are charming, the method is too laboured lacking realistic effect for us to desir revival.

Pen-and-ink work, necessitating adoption of a somewhat rigid conven allows of more easily acquired perfe within these limits, while with a med

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* Extracts from a Paper read before the Society of Architects on May 14th.

ng a broader manner, success, though
difficult, will be the greater accom-
nent.
systems we have direct or ortho-
ic projection, isometric projection and
ective. The value of the first two
sional systems may be increased, from
escriptive point of view, by the em-
ient of sciography, the neglect of
during a few generations was not
ed by the contemporary standard in
n, and which we are all glad now to
evived.
practice of indicating shadows seems
ve ceased during the Gothic revival,
in exchange we adopted the thick-
nd Oxford Frame manner. I think
ay congratulate ourselves on the pass-
f these fashions, which sacrificed a
refinement and feeling for detail,
ire responsible for much coarse and
r design.
metric projection is a valuable sys-
combining the effect of perspective to
extent, with the added advantage of
ossibility of reading to scale in three
isions from the single drawing.
w, although there is promise of im-
ment in design through the revival of
tely drawn and shadowed and ren-
elevational drawings, I hope that we
not forget our perspective. The Eng-
School has always been strong in per-
ive, and the system always must be
alled for the realistic representation
id forms. To me it is astonishing that
ules of perspective remained undis-
ed so long, and that the uninitiated
ind it easier to draw objects in plan
levation, *i.e.*, as they are, than in per-
ve, *i.e.*, as the yalways have and
s will actually see them.
ave referred to the advantages which
be expected to result when drawing
ies a subject of general culture, and it
desirable to consider how its study
be made easier—how the machinery
be simplified—for the simpler the
inery and the more easily mastered,
nore serviceable of course is the
ine.
cing and copying are valuable means.
ng, while ensuring a certain degree of
ss and corresponding encouragement,
s the whole of the attention to be con-
ited on the subject and quality of line,
s, therefore, of the greatest value in
irly stages of instruction. Although
ossible to crawl along the lines think-
something else, the student will soon
hat he is able to impart character to
acing which may even turn out better
the original.
ier useful aids in copying, enlarging,
educing are squaring (by which a task
fficult to be tackled as a whole may be
up into a hundred parts, each easily
with), the pentagraph and camera
, useful instruments, which have the
itage of requiring something more
mere manual dexterity to manipu-
whilst as an elementary training in
alisation of solid forms and the rela-
of parts, exercises in "graphical dis-
on" prove excellent.

NIVERSITY OF SHEFFIELD
RTMENT OF ARCHITECTURE.

tour in Burgundy and central
e organised last year by the Depart-
of Architecture, Sheffield University,
g been very successful, a tour in
France is this year being arranged in
nction with the Rev. Dr. West,
.B.A. (author of "Gothic Architec-
in England and France"). The
arranged is London, Paris, Poitiers,
Limoges, Perigueux, Cahors, Bournazel, Rodez, Albi, Toulouse, Carcassonne, Nîmes, Arles, Avignon, Orange, Le Puy, Issoire, Clermont Ferrand, Paris, London. The party will leave London (Waterloo Station) on Monday, August 31, at 10.30 p.m., and will arrive back in London on Thursday, September 24, at 10.11 a.m. Every facility will be given, and the necessary permissions obtained for sketching and photographing. The fee for the course is 26 guineas (or 23 guineas starting and ending at Paris), and this covers all the usual travelling and hotel expenses. Those desirous of attending should obtain an application form from the lecturer, Mr. W. S. Purchon, A.R.I.B.A.

THE ROME SCHOLARSHIP AND HENRY JARVIS SCHOLARSHIP, 1915.

The Rome Scholarship will be of the value of £200 per annum, and will be ordinarily tenable at the British School at Rome for three years. Candidates must be British subjects, and less than thirty years of age on July 1, 1915.

The Jarvis Studentship will be of the value of £200 per annum, and will be ordinarily tenable at the British School at Rome for two years. This studentship will be confined to students or associates of the R.I.B.A. (see section B), but otherwise the conditions for the two awards will be the same.

The competition, which will be conducted by the Faculty of Architecture of the School at Rome, will be in two stages: A, an open examination; B, a final competition, open to not more than ten candidates selected from those competing in the open examination.

A. The Open Examination.

Competitors should notify the Honorary General Secretary, British School at Rome, 54, Victoria Street, London, S.W., as early as possible, of their intention to compete in this examination, and in any case not later than January 23, 1915, and with such notification must enclose a certificate of birth, or a declaration as to age and nationality, duly attested by two responsible persons. The subject for this examination will be "Courts of Justice." The building is to be placed on a site 400 feet square, having its principal frontage to a river; the buildings flanking the site are to be Government offices and their design is to be suggested, and they may be connected with the Courts building by open or covered ways. The water level of the river is 20 feet below the ground level of the site. The Courts of Justice are to be four in number, for civil business only, and they are to be contained in one building; each court is to measure 2,400 feet super.; public access to the Courts is to be from the river front through a large hall, judges and barristers to enter at the back. Four judges' rooms, and rooms for barristers, jurors, solicitors, and witnesses are to be provided, together with a bar library. A lower ground floor must be provided, suitably arranged for large numbers of clerks and for subdivision as offices. No provision is to be made for prisoners.

The drawings required are: Plan of ground floor showing the general disposition of the surrounding buildings, including the river embankment; plan of lower ground floor; two elevations; longitudinal and transverse sections—all to a scale of 1-16 inch to a foot; one principal elevation to $\frac{1}{8}$ inch scale; a detail elevation of part of the river façade to $\frac{1}{2}$ inch scale; a perspective of the river front in which the Courts of Justice themselves shall measure 18 inches.

A short descriptive report must accompany the design. The general drawings may be finished in ink or pencil, and the view in any manner at the competitor's discretion. Each design must bear a motto, and must be accompanied by an envelope enclosing the name of the competitor. Drawings must not be executed as part of a school course, and the competitor must submit a written statement to the effect that this regulation has been complied with, together with a declaration that the work has been done by his own hand. The drawings, together with the above-mentioned documents, must be sent to the Honorary General Secretary, British School at Rome, c/o The Secretary, Royal Institute of British Architects, 9, Conduit Street, W., and must reach him not later than noon on January 30, 1915.

B. The Final Competition.

This competition will be held "en loge" in London, and particulars regarding it will be announced hereafter. The successful candidate in this competition will be recommended for appointment to the Rome Scholarship, and the Student or Associate of the Royal Institute of British Architects who is placed next in order of merit will be recommended for appointment to the Jarvis Studentship.

THE BUILDING BY-LAWS ENQUIRY.

The question whether building and town and village development are unduly hampered by by-laws and local regulations is, as our readers are aware, to be the subject of an enquiry by a Departmental Committee which has been appointed by the President of the Local Government Board, and a representative of the "Standard" has interviewed two prominent members of the Committee, who have explained to him the scope and nature of the enquiry.

"The allegation that has been made," said Mr. Jerred, of the Local Government Board, a member of the Committee, "is that by-laws which were made many years ago remain unrevised, and are not applicable to present conditions. The question is chiefly of importance in the matter of cottages and building in country districts."

Mr. Raymond Unwin, another member of the Committee, said: "Some of the problems which I understand we shall discuss are whether the central authority should have more power to call for the modification of old by-laws; whether by-laws do hamper building; and whether it should be made possible to enact by-laws concerning matters which can now only be dealt with under the Town Planning Act. The whole difficulty with by-laws is that they tend so quickly to get out of date, and the central authority has no other power than to make the suggestion to the local authority that they should be revised. There are, for instance, in some places, by-laws which prevent the use of concrete instead of bricks and mortar when it might be desirable, or prevent experimenting with concrete buildings, because in the days when the by-law was made concrete was either not thought of or was not practically available. Again, there are by-laws compelling the building of parapet walls between cottages, which was all very well when they built forty or fifty to the acre, but when the tendency is to spread them out at ten or twelve to the acre such a by-law is quite unnecessary. The matter of the thickness of walls is another which has altered through changed materials."

CURRENT BOOKS.

Housing of the Working Classes.

These two lectures, by Mr. Seebohm Rowntree and Professor Pigou respectively, were recently delivered at Manchester University under the provisions of the Warburton Trust. In the first, Mr. Rowntree examines the question as to "How far it is possible to provide satisfactory houses for the working classes, at rents which they can afford to pay"; and he points out very simply and clearly the difficulties of the builder who is expected to provide houses at a very low rent, dealing especially with the price of land and the increased cost of construction—and those of the tenant whose wage is inadequate to meet more than a nominal rent. He examines the proposals of the site value taxes, and is favourably inclined towards them. He also believes in the principle of Garden Suburbs, as a panacea for the evils of overcrowding, on the grounds that the land is cheaper here than in the towns. This may be the case near York; but whatever may be said on the score of health, we are quite sure that "a better and a bigger house at the same rent that they paid in the town" would be difficult to discover at Hampstead or Gidea Park. The exodus from London, at any rate, has led to a larger increase in the price of land than Mr. Rowntree's optimism would lead him to believe; and even garden suburbs are not immune from this economic pressure. In another matter he is rather unduly pessimistic. Speaking of municipal town-planning, he believes that "only Birmingham has got a scheme through." This, as the figures recently published in the "Town-Planning Review" would tell him, is, to say the least of it, misleading. However, his firm and fair handling of the economic question is worthy of one who has spent years of labour and thought on this troublesome problem. Professor Pigou's paper on "Some Aspects of the Housing Problem" is admirably judicial in its handling of the question of State aid and in its generous vindication of Mr. Burns's Town Planning Act.

"Lectures on Housing." The Warburton Lectures for 1914. By B. Seebohm Rowntree and A. C. Pigou. Manchester: University Press.

The Modest Art of Stencilling.

Although architecture has been occasionally designated "the Cinderella of the Arts," that distinction could be more justly claimed for the very modest art of stencilling. No art, except that of the grainer, has been more persistently scorned and despised; but, like photography, it has survived, and for pretty much the same reason—that it is at least useful and convenient. Mr. Arthur Louis Duthie, the author of an admirable little manual on stencils and stencilling, is under no illusions about it. Indeed, he is quite engagingly frank. He knows that "it has been relegated by superior 'artistic' people to the limbo of 'trade,'" and also that "it has been graciously approved by dilettanti and amateurs and placed upon a false pinnacle, from which it will doubtless be deposed once again to give place to more handwork." Yet he has enough confidence in it to write a book about it, for he claims that stencilling is a way of saying something, a means to an end, and that the mere fact of its being simple and easy is nothing against it. There are frequent occasions on which the only alternative to stencil ornamentation is none at all. Moreover, this simplest of all the reproductive arts is of very respectable antiquity; for it was in common use among the early Egyptians and Romans; and those inspired stencillers the Japanese have used it for hundreds of years; and to those who will say that its being as old as sin would be no justification for it, what Mr. Duthie has to say and to show in its defence would not carry conviction. For our part, we think that the author certainly succeeds in showing, more potently by his examples than by his arguments, that stencilling, at all events with regard to the skill in design that it involves, is indeed an art, and a very respectable one. To some of the designs he shows it is impossible to deny a considerable measure of grace and charm, and the fact that they are to be reproduced by a process that is merely mechanical simply puts them into the same category as all the other reproductive arts. Very strong on the practical side, this little manual will be found in the highest degree serviceable to the workman as well as to the designer.

* "Stencils and Stencilling for all Purposes: Artistic and Decorative." By Arthur Louis Duthie, Lecturer on Practical Drawing to West Riding County Council. 164 pages, 7½ ins. by 5 ins., price 3s. London: 365, Birkbeck Bank Chambers, Holborn.

Building Construction Drawings.

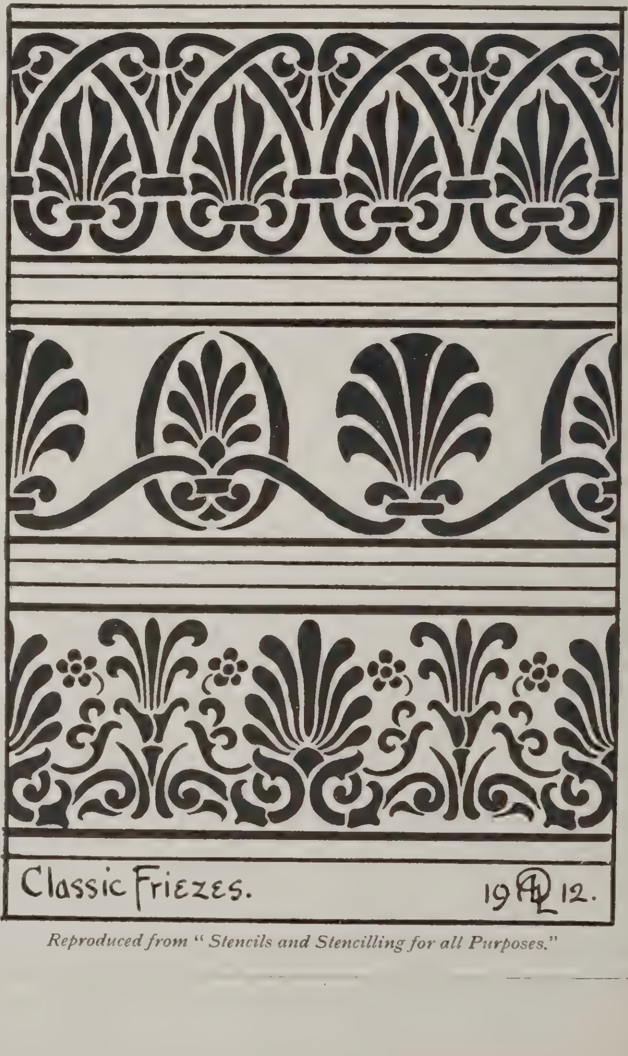
Building construction drawings, as presented in text-books, are usually too small to be of much service for the most effectual method of studying them. Merely to look at them is by no means sufficient for the average student, who requires the greater concentration and the more minute observation of details that come of copying the illustrations. This, we suppose, is the chief point that Mr. Richard B. Eaton had in mind in preparing the drawings under notice, which are reproduced sufficiently large scale, not only to out all the details with unusual clear but to afford excellent examples for d ing practice. Each subject is ac panied by a brief but useful specificat

"Building Construction Drawing: Part I. A Book for the Elementary Student and Artisan. Richard B. Eaton, Lecturer on Building Constru Poole School of Art and Technology. 26 Pla pages, 10¾ ins. by 7½ ins. London: E. and F. N. Ltd., 57, Haymarket.

Memoranda of Reinforced Concre Construction.

By the use of rather smaller type the average; by the reduction of the n rous diagrams to the smallest size patible with clearness; and, above al a severe economy of words, M. Jean Br has succeeded in compressing within paratively small compass much valu information on reinforced concrete struction. Conformably to the com Continental practice, the author has the other hand, devoted a great dea space to mere mathematics, fifty-six p being given up to matters of calcula and measurement. These data form first of the six sections into which the is divided. An extended vocabular the subject in five languages—Fre German, English, Italian, and Spa —is by no means the least valu feature of a manual that is replete practical information, and for which, ing examined it, everybody who is acti interested in reinforced concrete const tion would gladly accord shelf-r among the technical books that are r serviceable.

"Aide-Mémoire de l'Ingénieur-Constructeu Béton Armé. Par Jean Braive. Pages xiv. + ins. by 5½ ins., price 15 francs. Paris: H. Dun E. Pinat, 47 et 49, Quai des Grands-Augustins.



Reproduced from "Stencils and Stencilling for all Purposes."

MODEL ANSWERS TO R.I.B.A. EXAMINATION QUESTIONS.

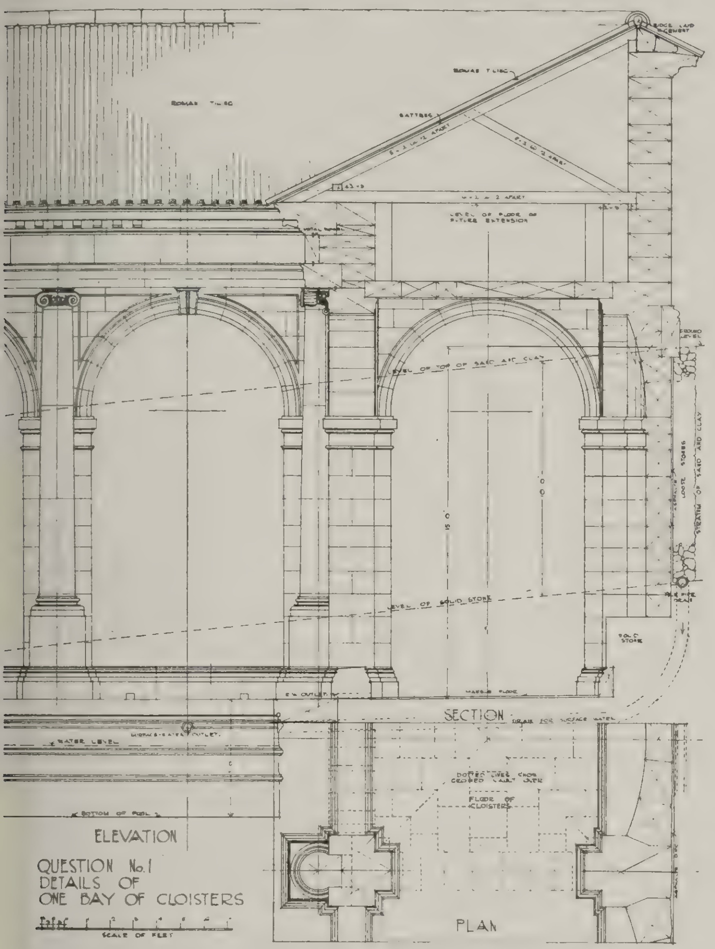
BY WILLIAM FRISKIN, A.R.I.B.A., ASHPITEL PRIZEMAN, 1913.

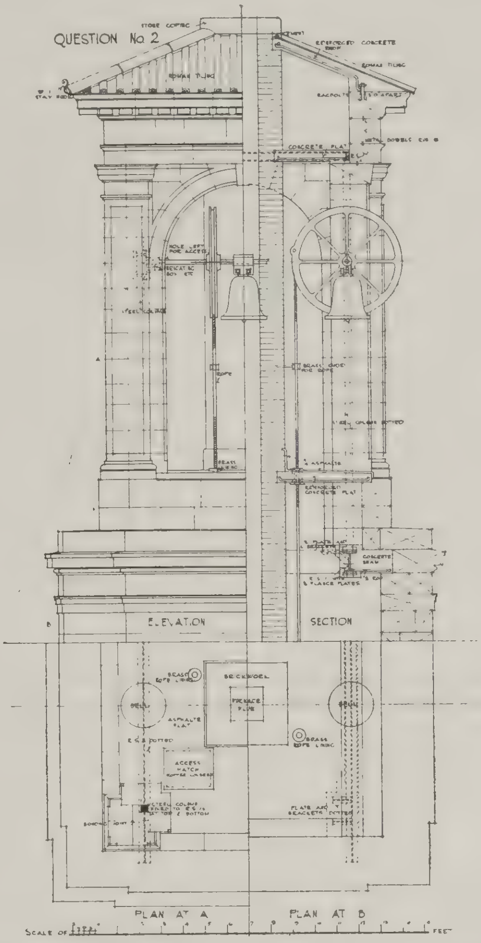
B1.—CONSTRUCTION.

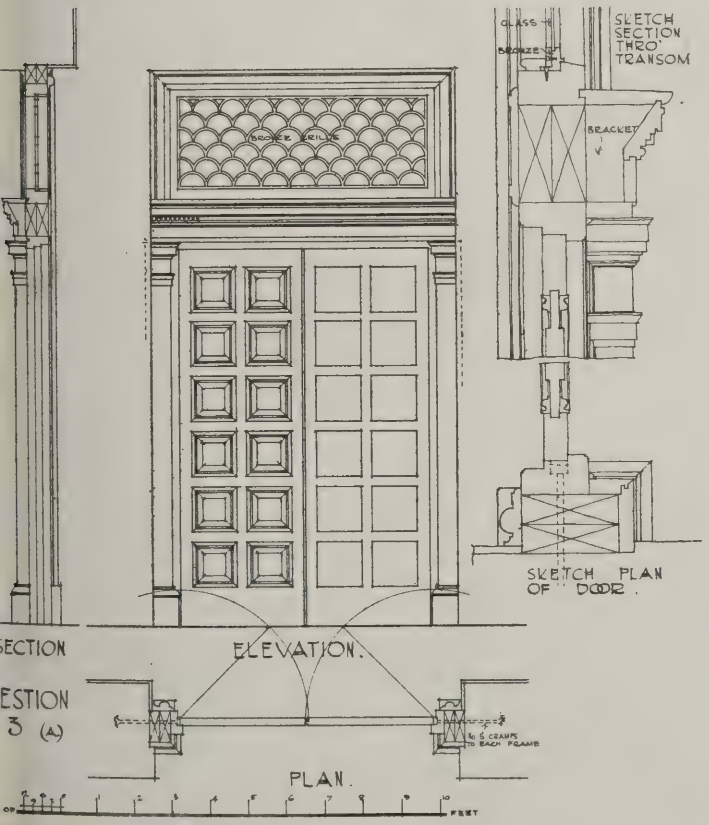
tion 1.—Draw to half-inch scale levation, and cross section indicat- e construction of a portion of the s mentioned in the subject for design, prepared for this examination, built into a hillside, the surface of which has an inclination of 1 in 10.

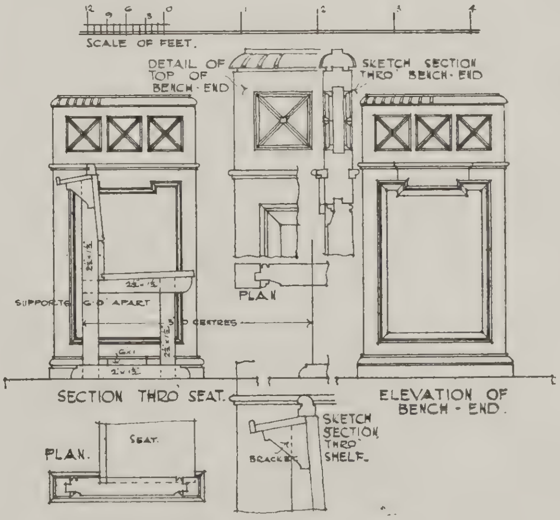
The sub-soil for a depth of about 10 ft. is partly sand and partly clay, below which there is stone, the strata of which run parallel with the surface.

The pavement of the cloisters is to have a maximum depth of 15 ft. below the surface.









Question No. 3 (B).

For Questions 2, 3 (a), and 3 (b), see next page.

The inner wall of the cloister towards the garth is to be arcaded or colonnaded, and to rest upon a solid wall, which is to be so constructed as to form the side of a pool of water fed from a spring on the hillside above; the bottom of the pool is to be 5 ft. below the pavement of the cloisters.

The cloisters to be so constructed as to admit of an upper range being added at a future time.

Answer.—See diagram on preceding page.

Question 2.—Draw to half-inch scale plans, sections, and elevations showing the construction of the upper part of a tower, with flue for crematorium and belfry, generally on the lines of your design prepared for this examination.

The walls to be of stone and the roof covering of Roman tiles, copper, or asphalt.

Answer.—See diagram on preceding page.

Question 3.—Draw to scale, 1 in. to a foot, plan, section, and elevation, with details sketched to a larger scale, to show the construction of:

(*a*) The main entrance door of the chapel, on the lines of your design prepared for this examination.

(*b*) Benches suitable for the chapel.

Hardwood is to be the principal material used, but metal, marquetry, etc., may be employed.

Answer.—See diagram on preceding page.

Question 4.—A detached workshop, two storeys high, 130 ft. long and 25 ft. wide inside, is to be constructed of timber, except the walls at each end, with fireplaces in both of same, which are to be of brickwork.

The sides to be of fir framing covered with corrugated iron, except where windows with deal sashes are required.

The floors to be constructed to carry a load of 1½ cwt. per ft. superficial, the lower one 13 ft. from floor to floor, and the upper one 12 ft. from floor to top of roof-plate. The roof to be of timber, in one span.

Draw to scale, 4 ft. to an inch, sketch plans and section of parts of the building, with details to a larger scale.

Answer.—See diagram opposite.

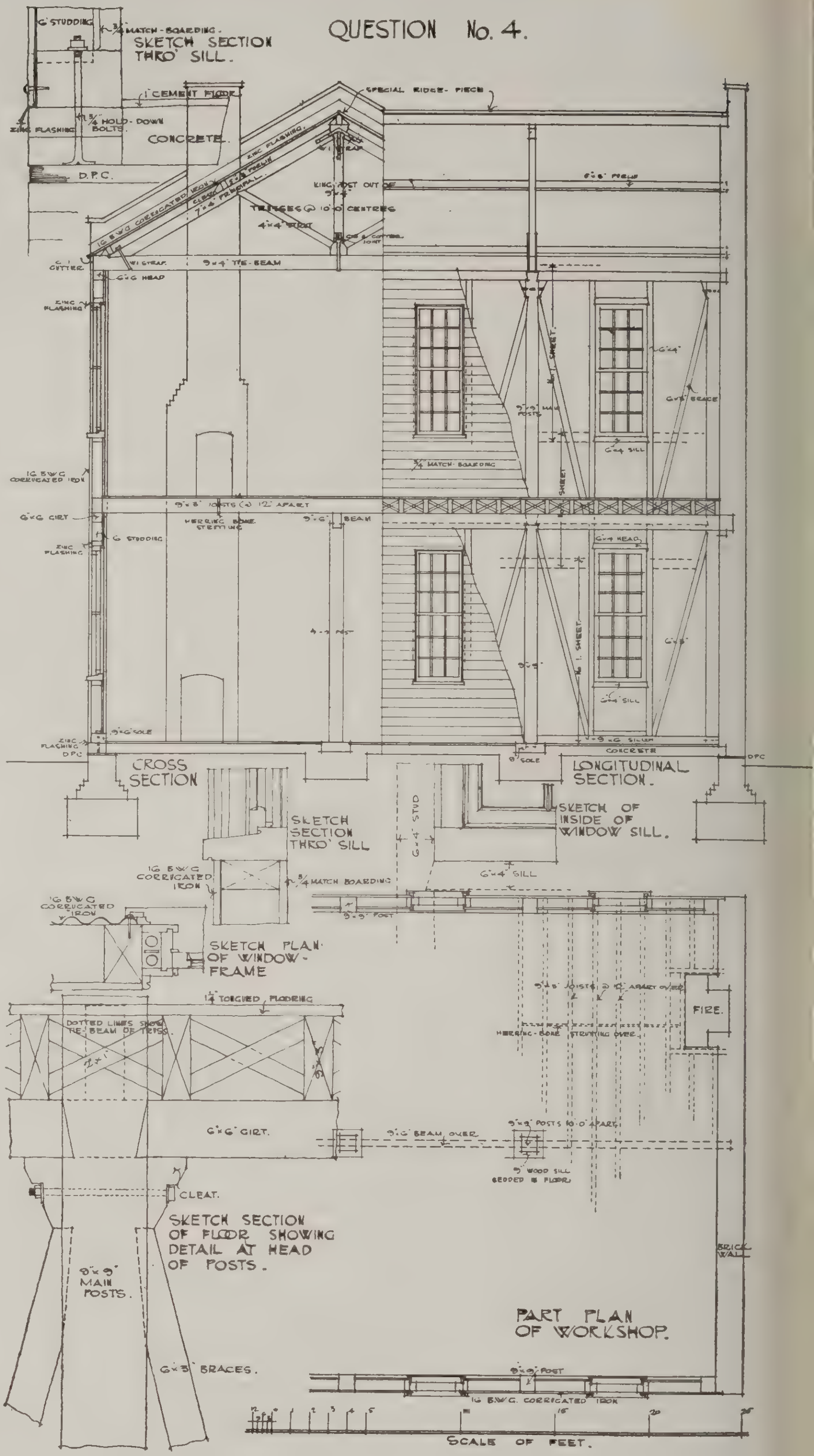
Question 5.—Draw to scale, 2 ft. to an inch, plan and section of a sloping gallery, with a straight front constructed of timber and woodwork at the end of a concert hall with seats in tiers. The width of the building to be 40 ft., and the depth of the gallery from front to back to be 18 ft. Oak posts may be introduced for supporting the gallery near the front of it.

Answer.—See diagram on opposite page.

[The foregoing article is the last of our series of model answers to questions set for the R.I.B.A. Final Examination, which was held in November last. The preceding articles were published in the following issues: April 29, May 6, 13, and 27.]

Midland Centre Year Book.

We have received for notice the "Year Book and Directory of the Midland Centre of the National Federation of Building Trades Employers of Great Britain and Ireland" for 1914, which, like its prototype, the "Official Year Book of the London Master Builders' Association," contains, besides the usual lists of members, and other official information, a diary, together with several pages of trade memoranda. It is edited by Mr. Fred W. Amphlet, secretary of the Midland Centre, 58, New Street, Birmingham.



TWO LONDON IMPROVEMENTS.

The Mall Approach Improvement.

The scheme to secure the completion of the Mall Approach improvement promoted by the Office of Works, in conjunction with the London County Council and the Westminster City Council, has received the approval of the House of Commons Select Committee presided over by Mr. Wedgwood Benn. The Committee decided that the preamble of the Bill was proved, and they declined to insert the clause suggested by the Phœnix Insurance Company, by which they proposed to undertake, conditionally on being allowed to retain so much of their premises as are not required for the widening, to repay 15 per cent. of the compensation payable to them in respect of the land taken, and also to refer to arbitration wh further sum, if any, should be paid by th in respect of the difference in the value the corner site and the adjoining site, wh they are to be given under the Bill.

Guildhall Improvements.

In 1911 the City of London Corporati passed an important scheme submitted the City surveyor, Mr. Sydney Perks, the rebuilding of large portions of Guildhall, at a total estimated expenditu of £130,000. For financial reasons matter was adjourned, but certain portio of the proposed works have now beco so urgent that the City Lands Committ has brought up a report recommendi that a part of the scheme be at once p into operation. The new works will volve an expenditure of £30,000.

SPECIAL LEGAL REPORTS.

for Breach of Covenant and for Dilapidation.

Florence v. Bentwich.

Official Referee's Court. Before Mr. Muir
izie.

Official Referee delivered his re-
judgment in this case, which was
d in our issue of May 20, p. 363.
d the great difficulty in the action
relation to the conflicting nature of
uses of the lease, and he held that
f the requirements had been com-
vith, while others had not. The
ant's obligation was only to remedy
fects as were specified in the notice,
e from breaches of the covenant.
date of the writ the defendant had
work he had ordered his builder to
ut complied with most of the obli-
he was under, but not all. The
was that, in the first action, plain-
aim was proved, as was also the de-
t's counterclaim. His judgment
it relief should be granted on terms
endant agreeing to pay the rent to
1914, viz., £150. Defendant must
y the surveyor's fees and solicitor's
s to the service of the notice. With
to the other action and matters in
, he thought the £150 paid into
vas sufficient. Taking the matter
her, judgment would be for the de-
t on the claim for breaches of the
ng covenants, and for the plaintiff
first action for £193. The costs
be adjusted and judgment would be
party in whose favour the balance
out.

Contractors and the Insurance Act.

Leslie and Co., Ltd. v. The Commissioners of H.M. Works.

May 20. King's Bench Division. Before Mr. Justice Shearman.

This matter came before the Court in the form of a special case, and raised an important point under the National Insurance Act. Messrs. Leslie and Co., Ltd., the London contractors, claimed an award in a dispute with the Commissioners of H.M. Works and Public Buildings, and the point at issue was whether the respondents were liable to recoup the contractors the amount they had paid to workmen as the employers' contribution under the Act.

Mr. Clavell Salter, K.C., and Mr. Boydell Houghton appeared for the appellants, and Mr. Lowenthal for the respondents.

It appeared that in the spring of 1911 the respondents were giving out some of their triennial contracts for the maintenance and upkeep of the buildings for which they were responsible, London being divided into districts for that purpose. The appellants were successful in their tenders for the north and south districts, and the contracts were drawn up after certain modifications. At that time the National Insurance Act was before the House of Commons in the shape of a Bill, and there was an interview with certain responsible officials of the respondents in regard to their pending liability under the Act. When the contractors sealed the counterparts, they wrote to the respondents stating their impression of the understanding between the parties, and receiving no reply they assumed that they had rightly expressed the view of both parties in saying the Board would refund any such insurance payments that were made. When the Act came into force a year later the respondents repudiated liability. The matter went before Mr. Stuart, a lay arbitrator, and the appellants now appealed from his finding by way of a special case.

The tender was for the contractors to do works of maintenance and repair upon measurement and scheduled prices, and to supply labour in day work—that was to say, to provide the money to pay a large number of workmen employed upon day work and to distribute the money among the men. As to the piecework the company were to be paid on schedule, and as to the day work their actual disbursements, plus a percentage. In view of the National Insurance Act becoming law the directors of the appellants wished to make sure that they would be recouped as part of their disbursements for the employers' contributions to all their men. Messrs. Leslie paid out over £4,000 in such contributions, and they thought that the contracts, as drawn up, would cover all disbursements, including the Insurance contributions. Mr. Singleton, the managing director of the company, went to the Office of Works shortly after the acceptance of the tender, and had an interview with officials, and when he left he was under the impression that his view that the contributions would be repaid was shared by the officials.

The arbitrator's finding was alternative in form. When the company sealed the counterparts of their contracts and sent them to the respondents they forwarded a letter with them, which has been referred to. That letter was not answered and the arbitrator had found:

(1) If in law the letter, which was intended to form a condition of the contract, does do that, the contractors are entitled to be repaid the contributions under the Act.

(2) If in law it does not form a condition of the contract, the contractors are not entitled to be repaid the contributions.

Mr. Salter submitted that the letter was accepted by both parties as a condition of the contract.

His lordship, without calling upon Mr. Lowenthal, decided the matter in favour of the Commissioners. The real contracts between the parties were those under seal, and he saw no ground for rectifying them. He therefore made a declaration that the letter in question did not form any part of the contract, and that the contractors were not entitled to be repaid. His lordship regretted that the matter had come before the Court.

Mr. Lowenthal said the matter had already been considered by the Commissioners and the Treasury.

Damages for Alleged Breach of a Building Contract.

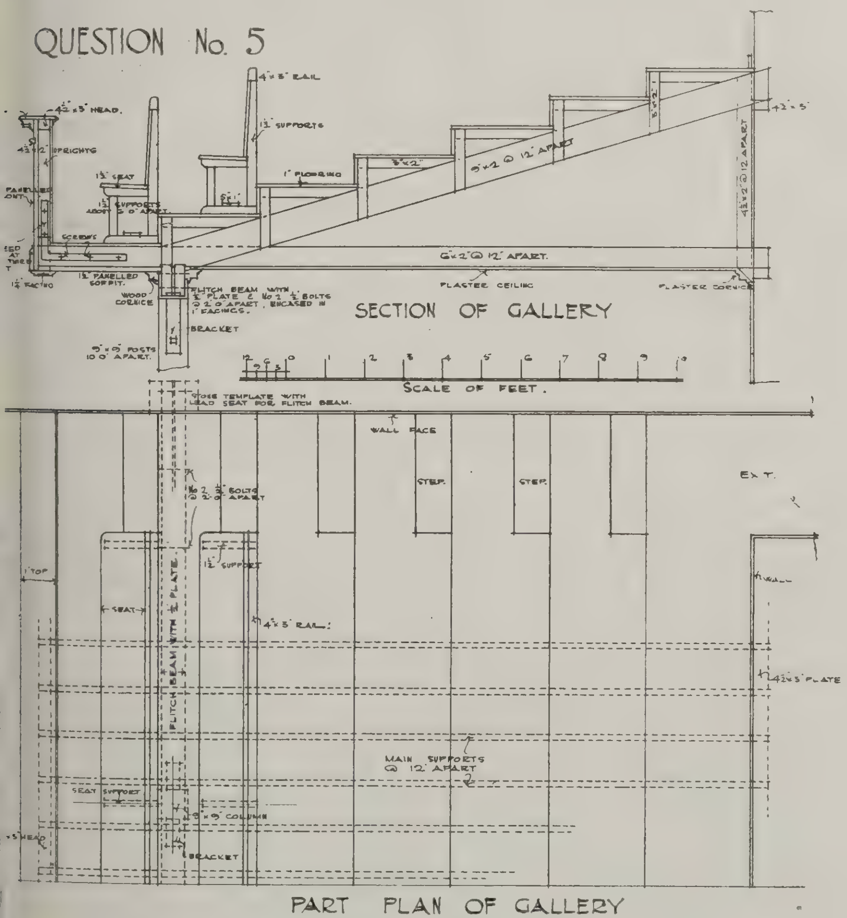
Lewis v. George Couzens and Sons, Ltd.

May 20. King's Bench Division. Before Mr. Justice Shearman.

This matter came before the Court in the form of a special case, stated by an arbitrator under a building contract.

The applicant, Mr. W. G. Lewis, was the owner of certain houses and property at Bedwas, Mon., and the respondents were builders and contractors of Cardiff. The applicant was desirous of converting into shops certain houses, and for that

QUESTION No. 5



MODEL ANSWERS TO R.I.B.A. EXAMINATION QUESTIONS.
(*See preceding page.*)

purpose he got into communication with respondents and they tendered for the work and entered into a contract to carry it out for £826, and the point for decision was whether the contract signed included the price of certain provisional sums or whether they were excluded. The respondents tendered £352 for converting the fronts of the houses into shops, and a total of £826 for this and other alterations to the houses. The parties did not agree, and the matter went to arbitration, the arbitrator awarding the respondents £150 damages.

After hearing counsel, his lordship affirmed the award of the arbitrator and gave judgment for respondents for £150 and costs.

OTHER PEOPLE'S OPINIONS.

Architecture and Life.

Life speaks more emphatically and coherently through architecture than through any of the arts, for the obvious reason that architecture is more intimate to life and touches life at more points than any other art. That we all feel; we all feel what a vivid presentment of the life of their own age the great styles of the past afford. What kind of presentment of present life does the architecture of the present afford? It is difficult to describe that art as it exists among us to-day, because of its various and experimental character. We must take hold of it by the only motive which will capture an appreciable part of it. Its strongest motive is the Classic tradition. Its characteristic works are imitations or adaptations of the buildings of Imperial Rome, and the favourite pastime of its votaries is to pretend that Constitution Hill is the Palatine, and King George V. the Emperor Augustus, and then to build accordingly. It is needless to observe that while the architectural profession and all its associations, academies, and newspapers are profoundly stirred by the result achieved, no one else notices it at all. What have the forms of a dead art to do with the living present? The men and women who pass up and down London's streets never turn their head to glance at the last composition in pilasters and pediments which has sprung up in their midst. The terms which exist between modern life and art could nowhere be better seen. Each vigorously ignores the other.—Mr. L. March Phillipps on "Art and Life," in the "English Review."

New Movements in Art.

It is a curious fact, and one worthy of the psychologist's attention, that the presentation of a new idea, the spreading of a new movement, causes in the world of art precisely the same reactions as a similar event causes in the world of politics. In both cases there is a certain amount of genuine enthusiasm, and a certain acclamation by the restless and ignorant; in both the great central mass remains inert; in both the loudest cry is that of outraged and indignant feeling. We accept this parallelism as a natural one, only, I think, because we are in this country politicians first and lovers of art in a very secondary degree. The Conservative in politics—if we may assume that he still exists—has a justification which cannot be pleaded by the Conservative in art. It is sacrifice and not tolerance which is demanded of the former; he is called upon to suffer an alteration in the preliminary conditions of his life, an alteration which may benefit a section of the community, but in the great majority of cases will impose a fresh limitation upon the liberty of his own class. In the world of art, on the other hand, a new idea, a new method, is a gift and not an exchange, still less a forced exchange; it claims not to alter or supersede the existing conditions, but to increase and diversify production; not to limit freedom, but to extend it.—Mr. Henry Newbolt on "Futurism and Form in Poetry" in the "Fortnightly Review."

New York and London.

One can hardly compare New York with London. At no definite point is it possible to say truly that the cities have anything in common. London has grown gradually. New York is being re-made every day. London has its wayward street, its green spaces, its irregularities, its hidden nooks and venerable alleys. New York's oldest house is one dating from about sixty years ago. It is possible to be exasperated at London and to love it at the same time. But in New York it is only possible to feel that the city has been planned by Euclid and set down by contractors. Its first and last impression—after one has passed the fairy palaces in the harbour—is one of hard, relentless perfection, the perfection of a very intricate machine.—Mr. Stuart Martin in the "Evening Standard and St. James's Gazette."

Artists and Critics.

If all that art-criticism does is to discover genius, then there is no such thing as art criticism as contrasted with art; there are simply two types of artists—the creative and the recreative; the producers and the appreciators. I mean that the act of appreciating a work of art is essentially the same as that of making it. If art criticism is a different activity from that of artistic creation, then it must produce something different—something of which art is the antecedent condition, but not the substance or matter. Of course a mere grunt of appreciation or dislike is different from the act of appreciation or disapproval, but it is only a dependent symbol indicative of the existence of something else; it has no existence in and for itself. Now it seems to me that art criticism does do more than merely express approval or disapproval, discover genius and lay bare charlatanry; it *explains*. The critic must have good taste, *i.e.*, he must be a recreative artist, and his taste precedes both logically and temporally his explanation; but the explanation is not the appreciation; it is the explanation of it. The explanation cannot create the taste in the case of criticism; according to rules and formulæ it attempts to; but, on the other hand, the taste cannot create the explanation.—Mr. A. H. Hannay in "The New Statesman."

The Architect and Fire Insurance.

Every architect, consciously or unconsciously, is the architect of an insurance rate. If, on the completion of a building, his client finds that by giving no thought to fire protection he has inflicted upon the building and contents a fixed charge for insurance which might have been avoided, it seems reasonable that the client should complain. The client himself, however, is often the primary offender, demanding features which, if incorporated in the plan, are penalised by the underwriters. What we desire is that the architect shall be willing to help educate his clients in this matter, and at least point out to the latter the desirability of considering the plans from the angle of fire prevention.—"Journal of the American Institute of Architects."

TRADE AND CRAFT.

The Pitter Multiblade Fan.

In the multiblade fan a number of c
paratively narrow blades are arranged
behind another, the effect being that w
the total air-surface of each group is lar
than that of a single blade of the ordin
type, the resistance is much less, no e
currents are produced, while swift
silent running is ensured, the air mov
freely through the channels formed by
blades. For offices, sick-rooms, hospit
and so forth the noiselessness of these f
will be almost as much esteemed as th
efficiency. In the pedestal desk fan,
swivel-and-trunnion desk or bracket f
and the oscillating fan, speed regulat
are fitted in the base, with half, th
quarter, full, and off positions.

Revolving pendant fans, of wh
several patterns are illustrated in the ca
logue, include the cabin ceiling fan,
cabins, small rooms, and railway
riages. Exhaust fans, for hotels, rest
rants, kitchens, smoking-rooms, mills, f
tories, etc., are made in about a dozen
ferent sizes, the blades ranging from 12
to 60 in. in diameter, and in all these,
well as in the other patterns, silent r
ning, highest efficiency, and lowest c
rent consumption, are special charac
istics. Automatic shutters and
starters and regulators are also listed
this distinctly useful catalogue, which
issued by Pitters Ventilating and En
neering Co., Ltd., 20, Bishopsgate, L
don, E.C.

Business Expansion.

Messrs. Stanley Jones and Co., L
designers and manufacturers of hardw
and metal shop-fronts, show-cases, sh
fittings, plate glass facias, etc., 8, Gra
Inn Road, Holborn, W.C., write to us
follows: "In paying testimony to the v
satisfactory results secured by us fr
judicious advertising in your journal,
wish to state that our business and c
nections has increased to such an ext
that in order to meet the fast-grow
demands made upon us from the Argent
for estimates and designs of shop-fro
showcases, interior fittings, etc., we h
decided to incorporate with our par
company a complete shopfitting busi
at 1386, Charcas, Buenos Aires. For
purpose of developing this section,
Managing Director, Mr. F. G. Lucas
sailing early next month to South Amer

"This new venture bids fair to be an
qualified success, as a great outlay we h
been most fortunate in securing the
agency for the Argentine for the now w
known 'Triplex Safety Glass.' As
Lucas will be in residence in Buenos A
for some considerable period, it would
a pleasure for him to fulfil any little c
mission any of your readers may de
him to undertake. Any communicati
addressed to him: c/o Saloon,
R.M.S.P. Araguaya, Southampton, on
before June 5, will receive the custom
prompt attention."

A Useful Heat Chart.

Messrs. J. H. Sankey and Son, L
firebrick specialists and manufactur
whose head office is at Essex Wh
Canning Town, E., have issued an
teresting chart, showing the relative m
ing, boiling, and freezing points of vari
substances, etc. The temperatures are
dicated both in Fahrenheit and in Ce
grade degrees, and are ranged in
ascending scale, the gradations being
dicated graphically, also, by means o
parallel column in which the effect of

is represented by colours, which
from black through red just visible,
ed, cherry red, orange, yellow, and
g, to white—from absolute zero to
roximate heat of the sun. Sankey's
ks, fireclays, and "Pyruma" fire
appear very high on the list, taking
xt place to platinum, of which the
point is 3227 degrees Fahrenheit
75 degrees Centigrade, while the
for the bricks, clays, and cements
ven as approximately 3200 degrees
heit and 1760 degrees Centigrade,
places them far above nickel and
nese. Mounted on stout card, with
n cord for hanging it up, the chart
nctly useful.

"Ideal" Wall Radiators.

llustrated catalogue issued by the
al Radiator Company, Ltd., 439 and
xford Street, London, W., shows
e conditions of economy of space,
st, and efficiency, are met by the
" wall radiators, and demonstrates
a series of views, their adaptability
diverse types of buildings, ranging
Wells Cathedral to a greenhouse.
radiators, being specially intended
where space is restricted and valu-
re very compact. No floor-space is
ry for their erection, and when
n the regular brackets they form a
ion of no more than three inches
e wall, while it is claimed for them
ey effect a saving of 50 per cent. of
ce for an equal heating capacity.
re therefore particularly suitable
ustrial purposes, for narrow halls
nall bathrooms in private resi-
flats, hotels, ships' cabins and
ys, and for any position where pipe
vere formerly used. Apart from
ormal position near the floor-level,
adiators can be conveniently placed
y positions for which other forms
ators could not well be employed—
ings, in skylights, for top heat in
ouses, etc., etc. When installed in
ey secure an equable distribution
with economy of fuel, as it is pos-
o turn off one or more radiators
he weather conditions do not de-
he full heating capacity provided.
ticultural work these radiators are
larly well adapted, as the cost of
is low, and sections can be easily
or removed, while relatively small
an be employed, and these can be
se to the ridge, ensuring top heat,
ssists ventilation and tempers the
ering through the roof ventilators.
ethod renders possible the employment of vertical sectional boilers with deep firepots. As already noted, these radiators can be placed in almost any position, and suitable brackets are supplied for fixing them to concrete, wood, or other floors, or to brickwork or wood partitions. That they are neat and attractive in appearance is evident from the illustrations in the catalogue, which the company will be glad to forward on application.

Waterproofing by "Ceresit."

In a number of important contracts which have lately been carried out in Manchester and neighbourhood, "Ceresit" has been used as a means of waterproofing. Among these contracts are included the Manchester Royal Infirmary extension, waterproofing basement and retaining walls; the Co-operative Wholesale Society's grain silo at Sun Mills, Trafford Park; and the new bakery at Beswick, the basements of which have been waterproofed with "Ceresit"; at Greenfield, waterproofing the basement; at Silverdale, waterproofing the strong room; Rochdale Infirmary extension, waterproofing basements, retaining walls, parapet walls, verandahs, etc.; Whalley Asylum, waterproofing rough casting and concrete work; new Council School at Clitheroe waterproofing floors and basement; Hooley Hill, waterproofing basement; Council School at Widnes, waterproofing basement; Arundel's foundry, Stockport, waterproofing basement used for pattern store.

Modern Methods in Korea.

That foreign countries are not much behind us in assimilating modern methods is evidenced by the fact that the Korean Government Railway have adopted Pudlo, the powder which makes cement waterproof, for their large new station at Seoul, Korea.

COMPETITIONS.

School, Blairhill, Dysart.

The design submitted in the above competition by Mr. W. Williamson, of Kirkcaldy, has been accepted by the Kirkcaldy and Dysart School Board. The building is estimated to cost between £7,000 and £8,000.

School, Loanhead, N.B.

Mr. J. A. Carfrae, of Edinburgh, the assessor in the above competition, has selected the design of Mr. J. Inch Morrison, Licentiate R.I.B.A., of Edinburgh. The new school will accommodate 500 pupils and is estimated to cost between £6,000 and £7,000.

Hythe Concert Hall.

Members of the Society of Architects are requested not to take part in the above competition, the conditions not being in accordance with those approved by the Society.

PROJECTED NEW WORKS.

Rebuilding Bridge, Ludham, Norfolk.

Norfolk County Council are considering the rebuilding of Ludham Bridge, at a cost of £1,750.

Hospital Extensions, Leeds.

It is proposed to carry out various extensions and alterations at Leeds Hospital at a cost of £8,471.

Nurses' Home Additions, Sheffield.

The Guardians have decided to borrow £6,260 for alterations and additions to the nurses' home.

Open-air School, Huddersfield.

A site has been secured by the Huddersfield Education Committee for the building of a new open-air school.

Church, Southwold.

Plans have been passed by Southwold Town Council for the erection of a Catholic church and presbytery on a site near the Common.

Education Offices, Herts.

Herts C.C. have approved plans, prepared by the County Surveyor, for new education offices to be built at a cost of £3,500.

Laundry, Alverstoke.

Alverstoke Board of Guardians have approved plans and estimate, prepared by Mr. H. A. F. Smith, for the new laundry and hot water supply.

Hospital Extension, Wakefield

Wakefield City Council have decided to apply to the L.G.B. for sanction to a loan of £13,850 for the purpose of extending the Infectious Diseases Hospital.

Bank, Hawick.

New premises are to be built in the High Street of Hawick for the Hawick National Security Savings Bank, the plans of which have been passed by the Town Council.

Victoria Courts Extension, Birmingham.

It is proposed to extend Victoria Courts, Birmingham, at a cost of about £27,000. Plans and specifications are under the consideration of the City Council.

Extensions, Shipley.

Plans have been prepared by Messrs. T. H. and F. Healey for an extension of the Church Hall, Shipley, at an estimated cost of 1,730, and for a new vicarage.

Church, Cults, Aberdeen.

Plans have been approved of a new church to be erected from the designs of Mr. A. Marshall Mackenzie, LL.D., at Cults, Aberdeen, at a cost of about £4,000.

Smallpox Hospital, Wortley.

Wortley R.D.C. are about to build a smallpox hospital at a cost of £4,500. They are also considering the erection of new council offices at a cost of about £3,500.

Swimming Baths, Coventry.

An enquiry by the L.G.B. has been held into an application by Coventry City Council for permission to borrow £15,000 for the extension of the public baths in Priory Street.

Continued on page xx.

"IDEAL" WALL RADIATORS INSTALLED IN SKYLIGHTS.

THE BUILDING TRADE CRISIS: NATIONAL LOCK-OUT IMMINEN

CONTRARY to general anticipation, the trade unionists, in the ballot of which the results were announced on May 28, have voted against a settlement of the dispute on the conditions proposed at the joint conference which took place on May 15 and 18.

The figures in the ballot were declared to be as follows:

Against the proposals ...	21,017
For	5,705
Majority against	15,312

The following table, reproduced from "The Times" of Mav 29, shows how the various sections voted:

	For.	Agst.
Amalgamated Society of Carpenters and Joiners	1,127	4,163
General Union of Carpenters and Joiners	430	1,044
Plasterers' Union	32	1,470
Plumbers' Union	180	459
Painters	182	2,195
Crane Drivers	79	9
Hot Water Fitters	261	226
Stone Masons	775	204
Bricklayers	683	2,572
Machinists	159	114
Builders' Labourers' Union	593	2,819
Gas Workers and Gen. Labourers (Building Trades Section)	378	3,203
Navvies	490	110
United Order of Labourers	393	2,423
Rotherham Union of Crane Drivers	43	6
Total	5,705	21,017

The Masons' Union, it will be seen, showed a large majority in favour of accepting the proposals, but at the meeting of the delegates from the eleven unions composing the London Building Industries Federation last Thursday the representatives of the masons made it perfectly clear that they were ready to abide by the verdict of the majority and to continue the struggle.

The result of the ballot was at once officially communicated to the London Master Builders' Association, who thereupon (May 28) unanimously passed the following resolution:

> That the National Federation be requested to put into operation the resolution of their Executive Council of May 11, 1914, this Association having complied with the terms of that resolution.

The text of the resolution of May 11 of the National Federation Council is as follows:

> Whereas the London Master Builders' Association has reported that it has this day received a request from the Trades Unions involved in the London dispute for a conference with a view to settlement, it is resolved that before taking definite action in support of the London Master Builders' Association as indicated in the resolution of this Council, the London Master Builders' Association be requested to accede to the request for a conference, including one of the National Executives of each of the eleven Trades Unions, and in the event of the operatives refusing to accept terms that are within the recommendations of the National Board of Conciliation within ten days of such conference this Council recommends a general lock-out as provided in the rules.

The recommendations referred to in this resolution were arrived at on March 17, and were as follows:

> That, in the opinion of this augmented Board, the entering into a direct agreement between the London Master Builders' Association and the head executives of the various Trades Unions, to the effect that all duly signed rules between the L.M.B.A., and the local branches of the Unions shall be rigidly enforced, and the head executives of the various Trades Unions concerned undertaking under agreement that unless such rules are observed the head executives will not countenance any strike, and will suspend all benefits, and will countersign all rules agreed upon, then such undertaking shall be deemed a sufficient guarantee for their observance. It was further suggested that London should come under the conciliation scheme.

The effect, therefore, of the resolution of May 28 of the London Master Builders' Association is that the Executive Council of the National Federation of Building Trades Employers of Great Britain and Ireland are asked to confirm their resolution of May 11, which includes the recommendation of a general lock-out. This lock-out, it is estimated, would affect about 600,000 men, the National Federation having about 200 branches and 6,000 members.

It will be remembered that the London lock-out began on Monday, January 26, on the workmen's refusal to sign, on January 24, an individual agreement to work peaceably with non-unionists, this course having been determined upon by the employers in consequence of a series of twenty sporadic "lightning" strikes, which were in flagrant breach of the newly signed agreements between the employers and the Unions. As the minor incidents of the dispute have been recorded from week to week in the Journal, there is no need to repeat them here. The more important data are recalled above, and a very able statement of the whole case for the employers was given in our issue of April 8, p. 252.

Mr. S. Stennett, Chairman of the Workmen's Committee, declares that the one question on which the parties are divided is that of non-union labour. "If," he says, "the employers could meet us in some way by getting rid of the non-union labour which is no use to them [!], the dispute could be speedily settled."

For the following important communication, which is specially contributed to this Journal, we are indebted to a correspondent who has an intimate knowledge of the movement:

"The result of the second so-called ballot by the different Trade Unions involved in this dispute has not caused very much astonishment amongst those who were aware of the methods employed in obtaining the votes recorded, and it is much to be regretted that the workmen did not have any opportunity of expressing themselves upon one or other of the particular points in question. They had either to say 'Yes' or 'No' to the whole of the proposals which were put forward by the Council of the L.M.B.A. and their own representatives after very prolonged discussions. Further than this, in more than one instance, definite suggestions were made in circular letters accompanying the ballot papers to reject the proposals, and, in one case, the following words actually appeared. 'We desire to express the opinion that the offer of the L.M.B.A. represents a distinct defeat so far as we are concerned. . . . . We urge you to continue the fight.' The methods of balloting are curious, for it appears that the workmen have to attend their particular lodges and fill in the ballot papers and hand th
the officials. It is needless to off
comment upon such proceedings.

"The deputation which waited up
Council of the L.M.B.A. on Th
afternoon last impressed upon the
bers the fact that the Trades Unions
they represented seriously urged the
sity for all workmen being discharge
had remained at work during the di
These men are called 'scabs,' or '
legs,' by the Trades Unionists ar
'specially objectionable' therefore,
venture to state that no self-resp
builder, or, indeed, any employ
labour, could for one moment en
such a monstrous request. One of t
mands put forward by the Trades U
is for a further advance of at least
hour to all trades; this, coming in
ately upon the recent advances of
cally 10 per cent. granted during th
eighteen months, was, of course, n
sidered seriously. Other questions,
ing to increased rates of pay for ov
and travelling, and the reduction
hours of labour during winter, w
brought forward at the recent confe
and it is worth recording here that
the requisitions was to the effect th
men employed at a height of 60 ft.
be paid one penny an hour extra.'
a demand as this speaks for itself,
behoves every employer of labour,
as those who have the interests of
at heart, to strengthen their backs
join hands with those who are fight
a principle which, if once given up,
the means of the insertion of the thi
of the wedge of rampant Trades Un
into every other industry through
country generally.

"The whole question has now be
national one, for the men in Lond
being 'fed' by levies all over the c
levies which in some cases amoun
or 6s. per week per man; and, na
down to a fine point, this means t
provincial employer is helping th
don workmen to fight the members
London Master Builders' Associa
position that is, of course, intoleral
only to the provincial employer l
but to the Association which forms
section of his own National Fede

How the present position is rega
those who are suffering severely fr
consequences of the struggle, a
they are not actively engaged in
be to some extent inferred from the
ing extracts from a letter from "Ar
tectural Assistant":

"Among the innocent suffer
many small traders who have been
brought to the verge of ruin by th
don dispute, and I can imagine th
the large ones will be hard hit wh
find the provinces as unprofita
London. Architects also are feel
pinch, and are reducing their staffs

"My object in writing is to sugg
the non-combatants of all kinds
at once make a combined ef
secure peace. Surely they are suf
numerous, influential and impa
secure the respectful attention of b
ties, who have been hitherto left to
to their own devices. I feel cert
mediation by the R.I.B.A., in con
with the Surveyors' Institute and
one or two other professional asso
would soon bring to an end a strug
may otherwise drag on intermina
flicting untold ruin and misery."

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N.B.—The T.C.S.C. will be glad to collaborate with Architects on any construction, and place at their disposal the skill and experience of their Engineering Staff, and invite enquiries for their Handbook and Literature.

PROJECTED NEW WORKS.

Continued from page 399.

Council Offices, Barnet.

Barnet U.D.C. have passed a resolution approving the erection of council offices and a public convenience at a cost of £4,000. Mr. Chancellor, the local surveyor, is the architect.

Board Room, St. Albans.

St. Albans Board of Guardians have approved plans of a new board room and accessory apartments to be erected near the workhouse. Messrs. Mence and Finn are the architects.

Firemen's Dwellings, Wolverhampton.

Wolverhampton Town Council have recommended the erection, at a cost of £3,000. of ten houses for firemen's dwellings on land abutting upon Wadham's Hill and Red Lion Street.

Hospital, Hastings.

The work of preparing for the King Edward Memorial Hospital has been begun, and the Governors have authorised the Committee to spend a sum not exceeding £50,000 on the building.

Sanatorium, Denbigh.

The Welsh Insurance Commissioners have approved the acquisition of the Plas Langwyfan estate, near Denbigh, as a site for a sanatorium, to be built and managed by the King Edward Memorial Association.

Infirmary Extension, Chelmsford.

Chelmsford Board of Guardians have adopted a resolution recommending that an additional infirmary block be built to contain 18 beds for men and a like number for women, and that instructions be given to the architects to prepare plans.

Nurses' Home, Newcastle.

Newcastle Board of Guardians propose to erect on a site on the Grange Estate a home to accommodate eighty nurses. Another site at Dunholme is also under consideration. The estimated cost of the proposed work is given as £5,000.

Premises, Sydenham.

New premises are to be erected for the Sydenham, Forest Hill, and District Tradesmen's Benefit Society, on a site in the High Street, Sydenham. The building will be three storeys in height and allowance will be made for additions at the rear.

Library and Art Gallery, Shrewsbury School.

The governing body of Shrewsbury School are about to begin the erection of a block of buildings intended to serve the purpose of a library, a large reading room for the boys, and an art gallery. This building, which will cost about £6,000, will be erected to the west of the school chapel.

Hospital Additions, Guildford.

The Guildford, Godalming, and Woking Joint Hospital Board have instructed Mr. J. Herbert Norris, architect and surveyor, Godalming, to report upon, and to submit estimates for, alterations and additions to the hospital.

Improvement Scheme, Blackburn.

A joint report (by Mr. W. Stirrup, architect, and Mr. W. Stubbs, borough engineer) has been issued with respect to a scheme for the improvement of Blackburn, involving a large area, including King William Street and Lord Street, Railway Road, the Market Place, Upper Church
Street, Astley Gate, and King
Sudell Cross, and Tacketts Street bl
buildings.

Cottages, Pembroke.

The Earl of Pembroke has deci
give as a memorial to his father
nearly two acres in extent, upon wl
is proposed, by the Pembroke Irish
ties, to erect sixteen model cottage
the designs of Mr. H. V. Crawfurth
Licentiate R.I.B.A.

Royal Devon and Exeter Hospi Extension.

The Governors of the Royal Dev
Exeter Hospital have decided to e
new wing to provide accommodati
the nursing staff. The approximat
of the scheme was stated to be £5,90

Town-Planning Scheme, Edinbu

Edinburgh Town Council have
to the proposal to promote a town-pl
scheme for areas at Comely Bank, M
field, Craigcrook, Blackhall, Rav
and Belmont. A public enquiry
held by the Local Government Boa

Swimming Baths, Bushey Par

A Local Government Board Inqui
been held at Hampton into the pr
to construct open-air swimming ba
Bushey Park at a cost of £1,150, the
to be drawn from the Cardinal
River, which irrigates Hampton
Palace Gardens.

Officiers d'Académie.

In our article on the Anglo-French
bition last week it was mentioned th
Curtis Green and Mr. Gerald Horsle
appointed *Officiers d'Académie.*
name of Mr. Ernest Newton as a re
of this honour should also have be
cluded.

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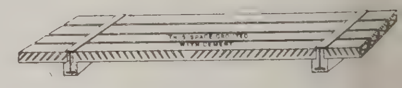
ERECTED WITHOU
CENTERING.

FACTORY, BIRMINGHAM.
View showing underside of Siegwart Flooring.



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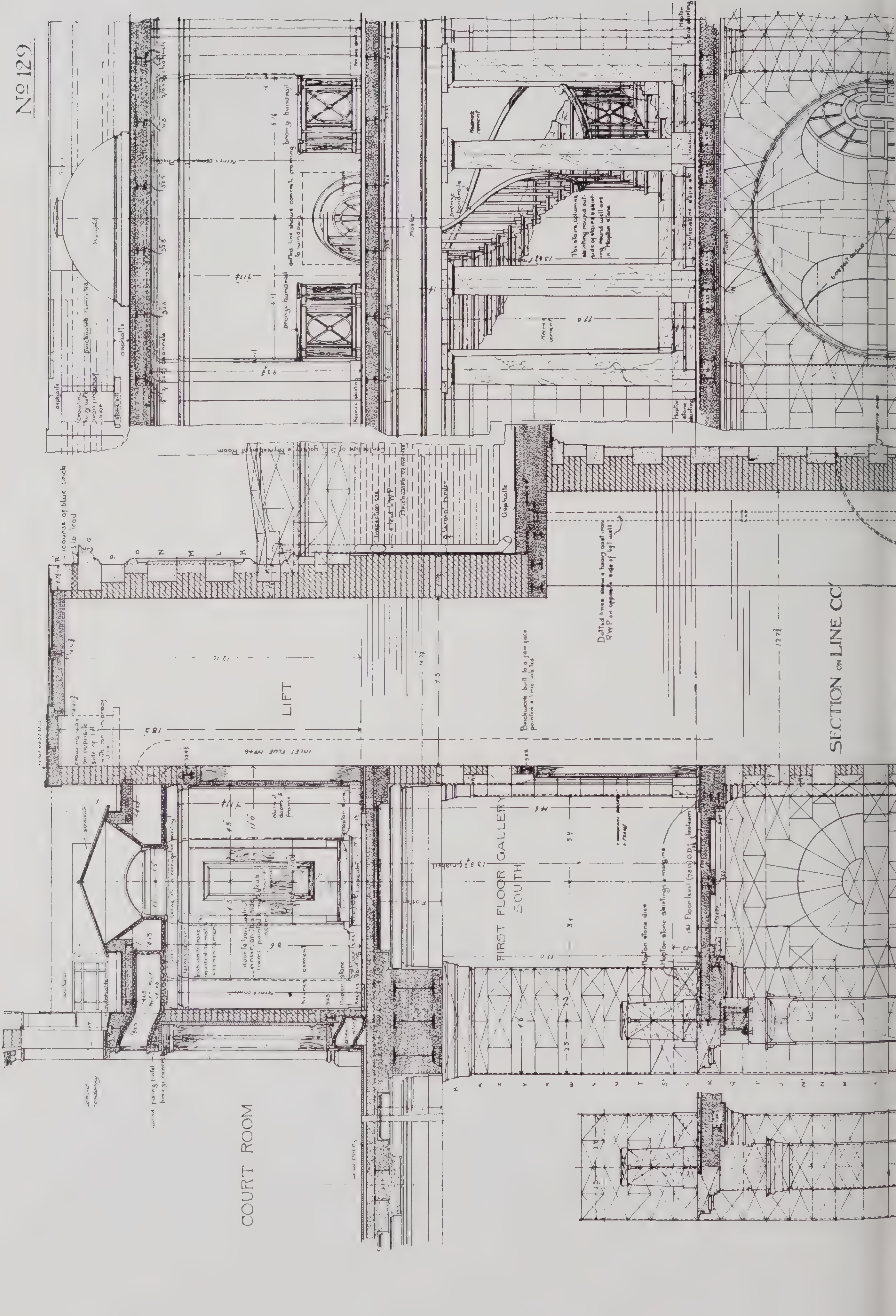
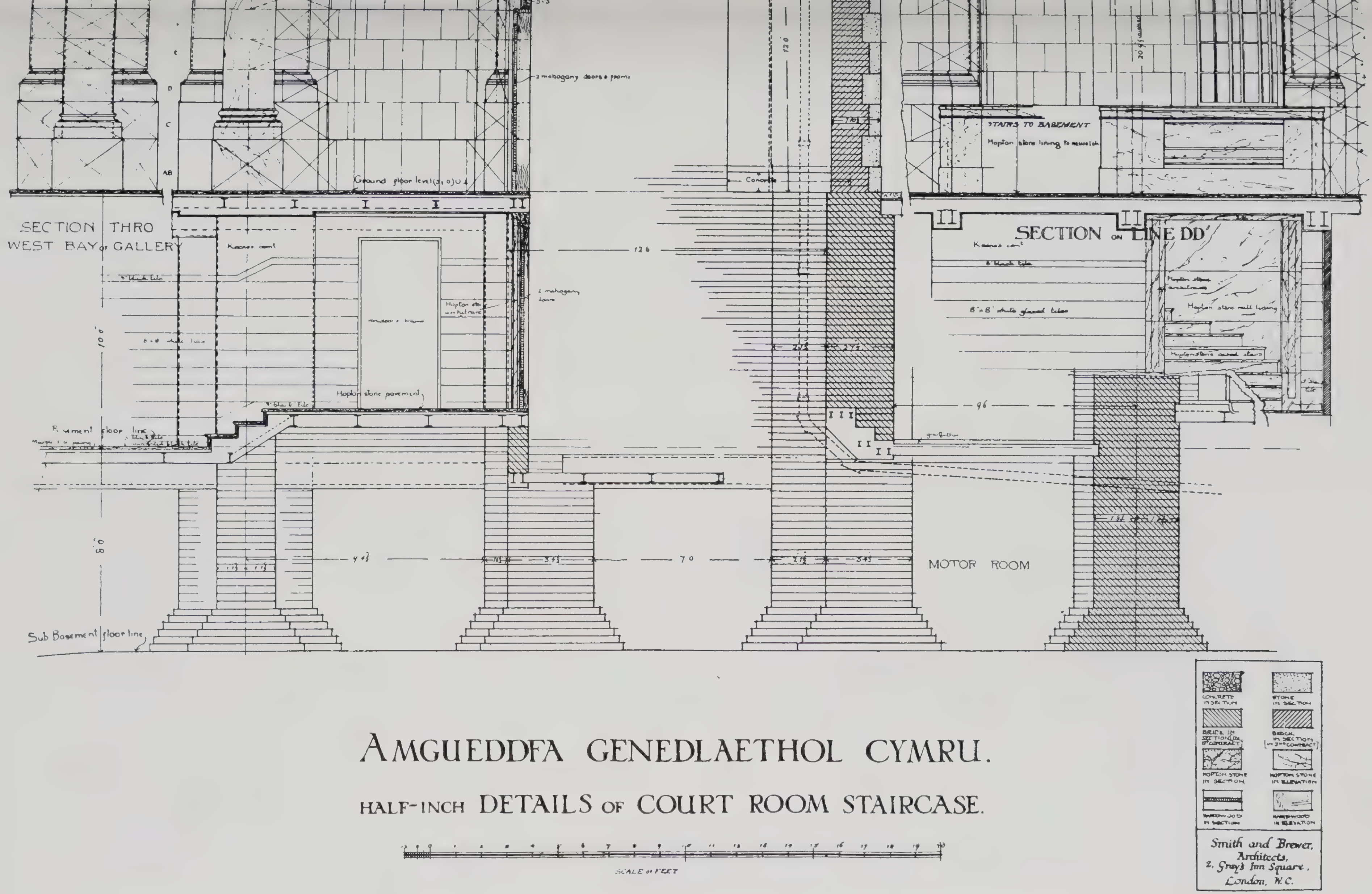
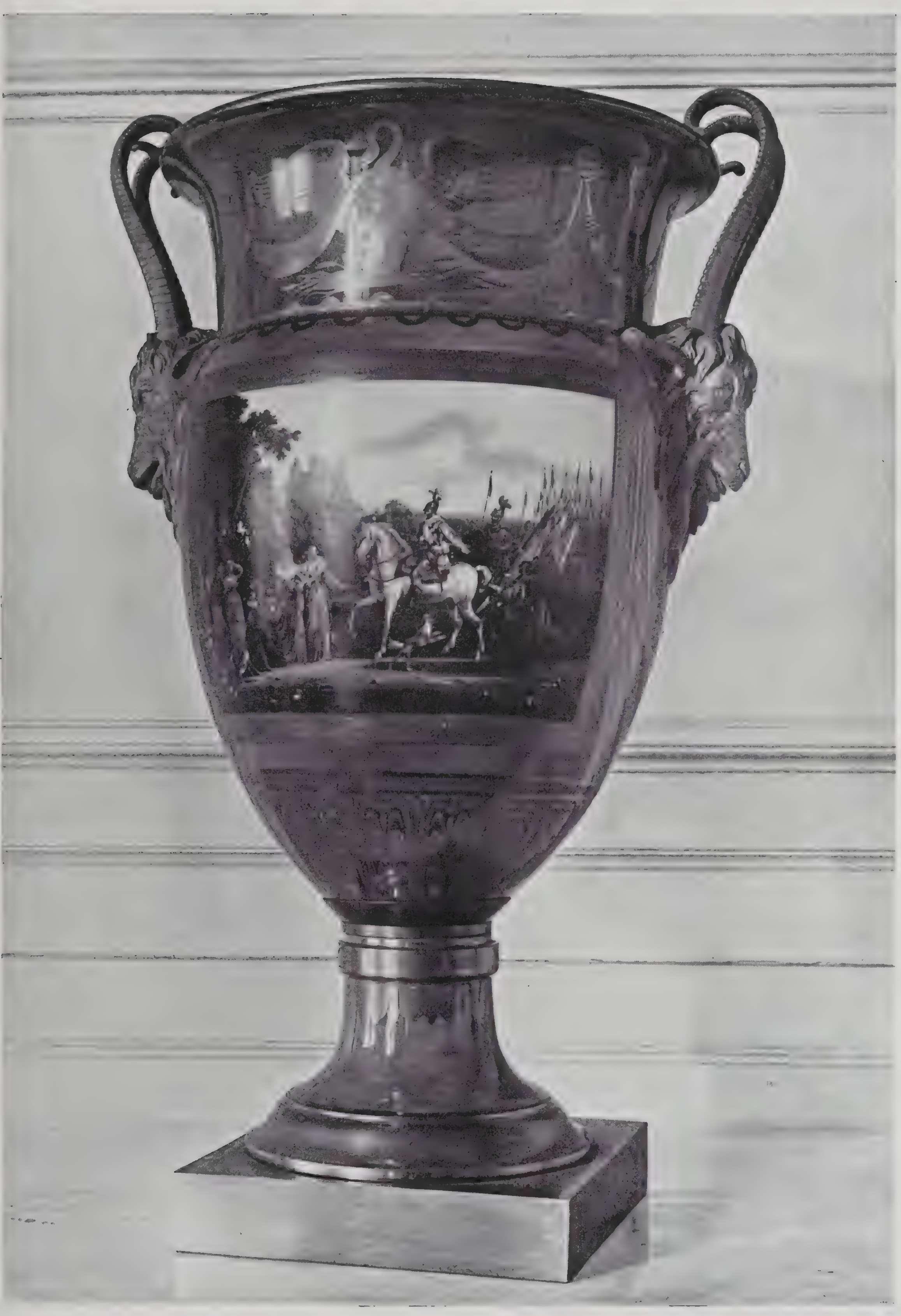

No 129.
SECTION ON LINE CC
LIFT
COURT ROOM
FIRST FLOOR GALLERY SOUTH
skylight
asphalte
bronze handrail
bronze handrails
dotted line shows concrete framing to window
Inspection eye
Asphalte
Dotted lines show 4 heavy cast iron RWP on opposite side of lift well
Brickwork built fair face pointed & lime whited
Hopton stone skirting
Hopton stone dies
Floor level
linoleum
INLET FLUE
P O N M L K
Z Y X W V U T S

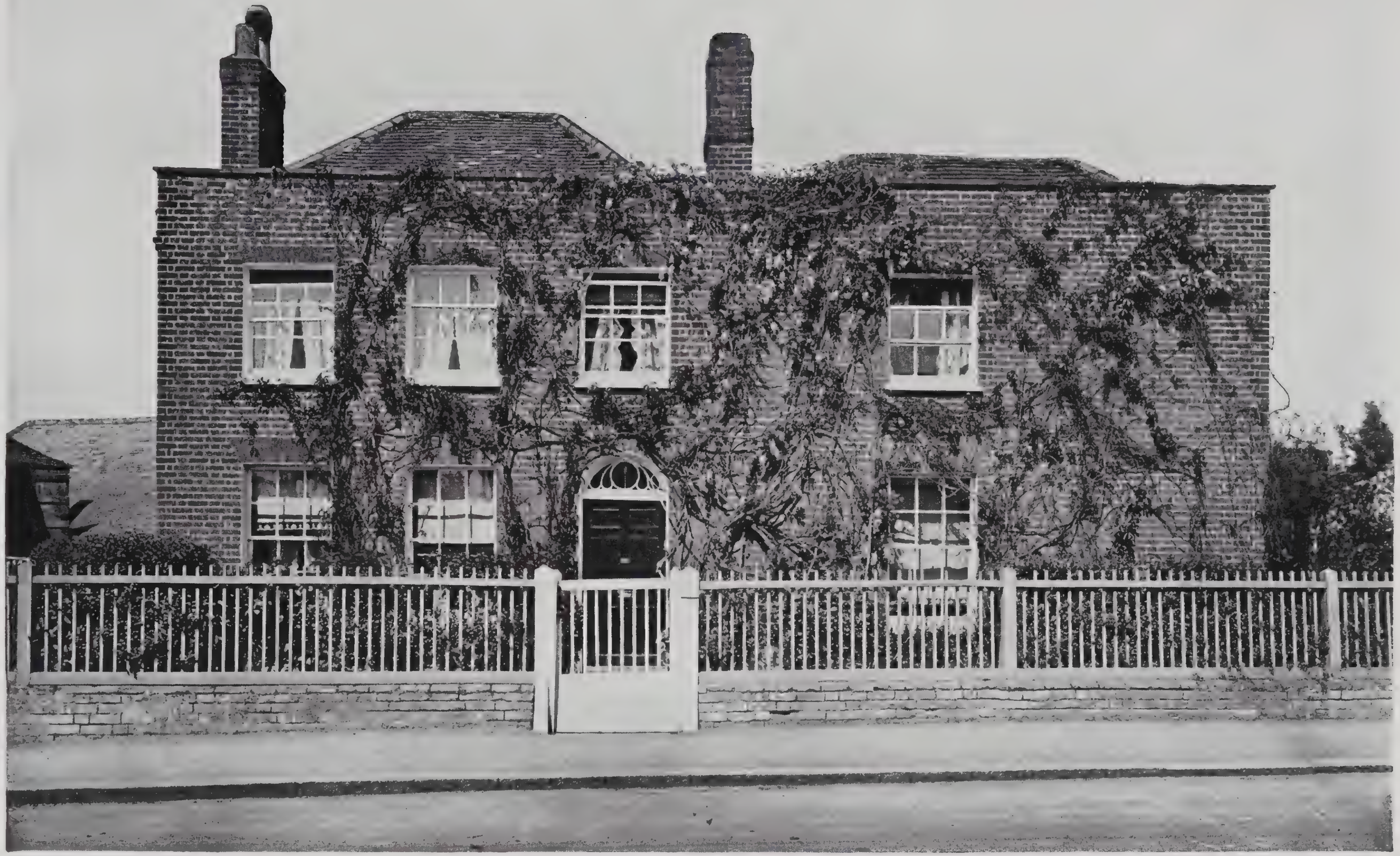


WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XXVII.—NATIONAL MUSEUM OF WALES, CATHAYS PARK, CARDIFF: DETAILS OF COURT-ROOM STAIRCASE.

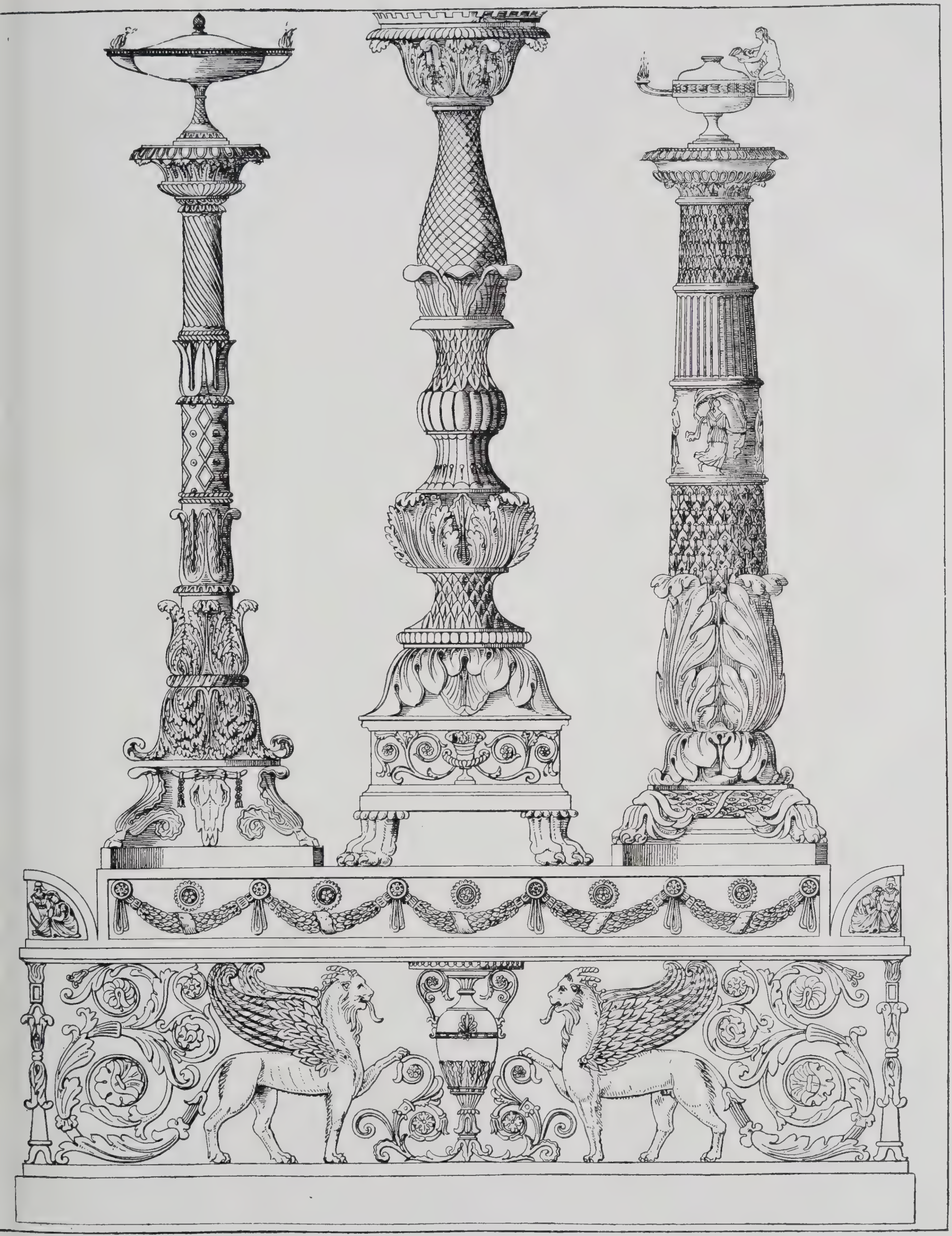
SMITH AND BREWER, FF.R.I.B.A., ARCHITECTS.



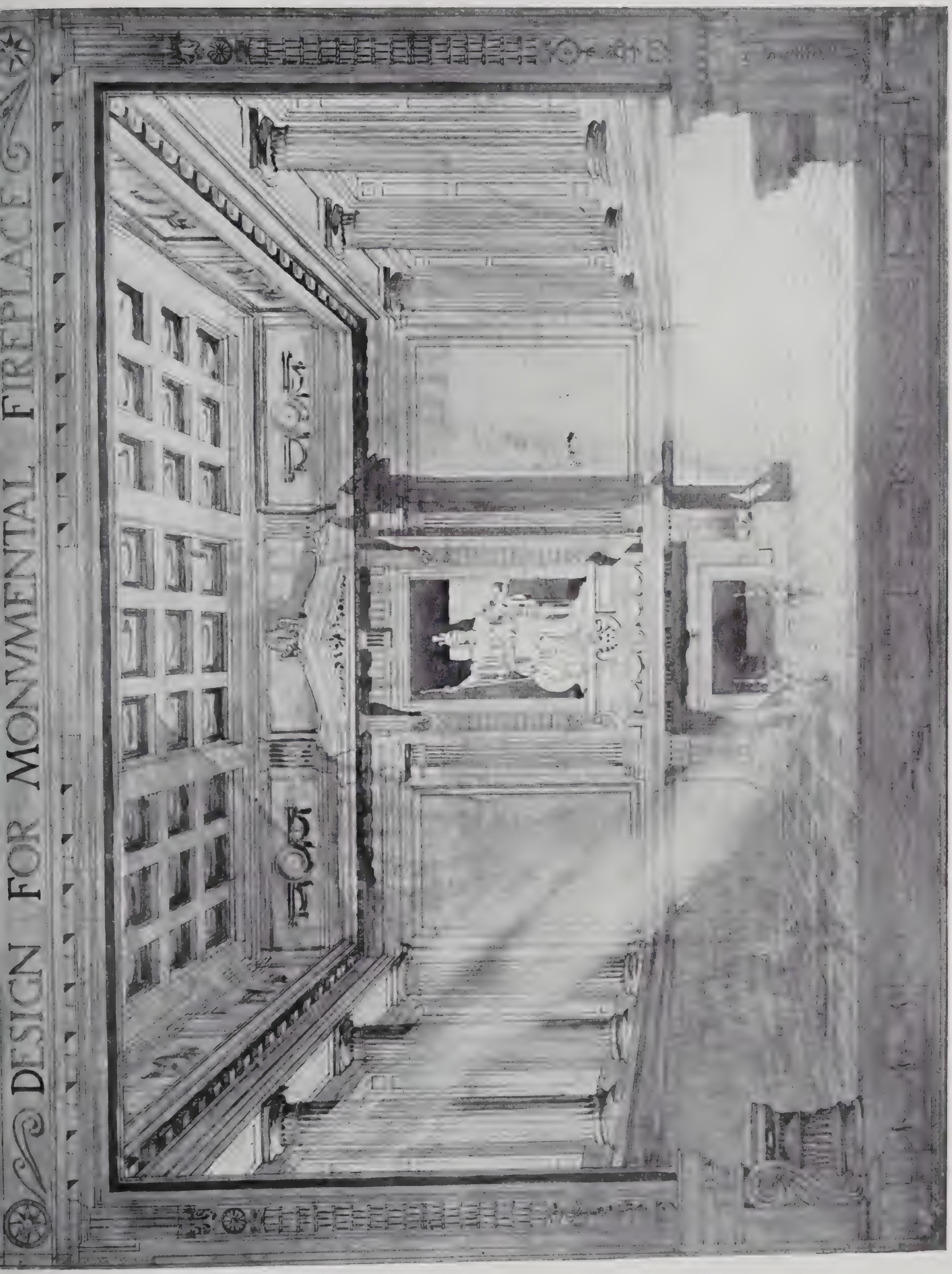
VASES. III.—EMPIRE VASE IN THE GRAND TRIANON, VERSAILLES.



SMALL HOUSES OF THE LATE GEORGIAN PERIOD. XI.—FARM HOUSE AT COBHAM, SURREY.

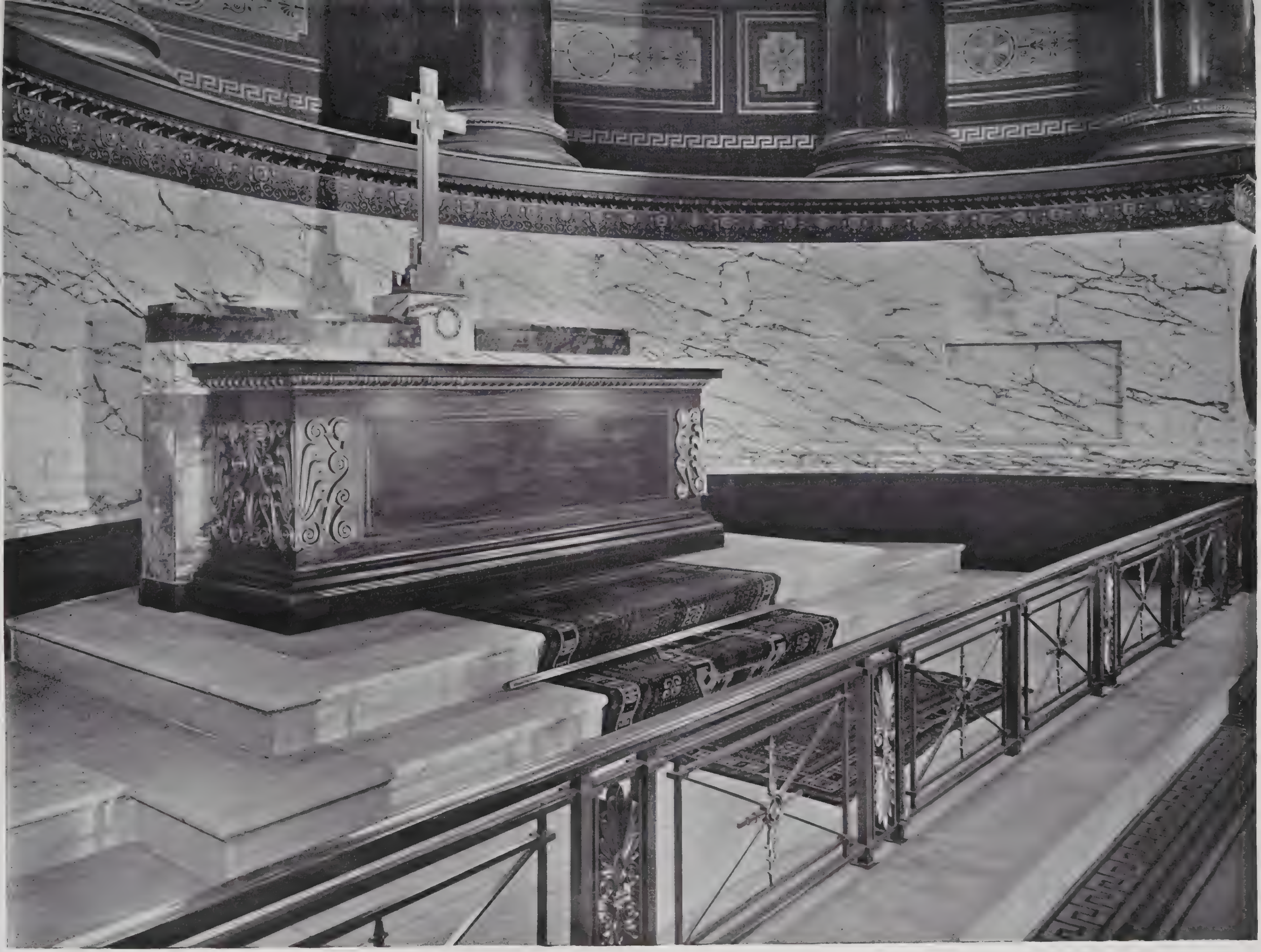


COTTINGHAM'S DESIGNS. XIV.—BRONZE STANDS FOR LAMPS, GAS LIGHTS, ETC.



STUDENTS' DRAWINGS. XVIII.—DESIGN FOR A MONUMENTAL FIREPLACE.

BY J. BURFORD.



CURRENT ARCHITECTURE. LXVI.—ALTAR IN ST. PANCRAS CHURCH, LONDON.

H. PERCY ADAMS AND CHARLES HOLDEN, F. AND A.R.I B.A., ARCHITECTS.

FOR LOCAL AUTHORITIES' SCHEMES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (Preparation of Schemes by Local Authorities), 1914.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art = The Articles of the Town Planning Procedure Regulations (Preparation of Schemes by L.A s), 1914. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = A Local Authority's Scheme under the Act of 1909. Owner = Owner within the Meaning of the Lands Clauses Acts. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets.

No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 8. Final Stage consequent on L.G.B.'s approval of scheme.	On receipt of Copy of Order finally approving scheme resolution to be passed approving Town Planning Committee's action in taking steps under Art. xxi. (*a*), (*b*) and (*c*). [Art. xxi.]	(*a*) Immediately on receipt of copy of order approving scheme advertise in Local Paper that L.G.B. have approved scheme and Particulars as to Inspection of Order and Map referred to in Order. [Art. xxi. (*a*)] (*b*) Not earlier than SECOND DAY after first publication of above advertisement serve copy of Order and Notice required under Art. xxi. (*a*) upon Owners and interested Councils. Also upon C.C. if any main road affected. [Arts. xxi. (*a*) and xxvii.] (*c*) Send copies of above order and notice, where necessary, to (1) Board of Agriculture and Fisheries; (2) Commissioners of Works. [Arts. xxi. (*a*) and xxvii.]			For THREE MONTHS from date of order approving scheme deposit such order and a copy of any Map or Plan referred to in such order for free explanation and inspection by any person. [Art. xxi. (*a*) and (*b*)]		(*a*) Within FOURTEEN DAYS of receipt of order approving scheme from L.G.B. send to L.G.B. certificate by Clerk or other person competent to certify containing information required by Art. xxiii., and exhibits in proof of compliance with the requirements of Art. xxi. (*a*). [Arts. xxi. (*c*) and xxiii.] The exhibits required are (1) Copy of Order; (2) Copy of Form of Notice served under Art. xxi. (*a*) (see Stage 8, Col. 3 (*b*)); (3) Copy of Paper containing Advertisement under Art. xxi. (*a*) (see Stage 8, Col. 3 (*a*)). [Art. xxiii.]	The scheme from the date of approval by the L.G.B. has effect as if it were enacted by the Act of 1909, and can only be varied or revoked by a subsequent scheme or by an order of the L.G.B. [Sec. 54 (5) and (6) of Act 1909]

CHART OF TOWN PLANNING PROCEDURE FOR LOCAL AUTHORITIES' SCHEMES—STAGE 8.

THE ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, June 10, 1914. Volume XXXIX. No. 1014.

No. 88.

(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

JUNE 10, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1014.

Impersonal Art.

IMPERSONAL art is the greatest art, because it is devoid of the narrowness of spirit which is born of caprice or of sectarianism. As this proposition appears to be quite obvious, it is somewhat remarkable that it should be so commonly disputed. If a work of art is to belong to all ages, and to be appreciated by all the nations of the world, it must be of universal appeal; and how can it have such a character unless it is the embodiment of general æsthetic principles? If it be asked how these principles are to be formulated, the reply is very simple. They can only be formulated by individuals. They cannot be apprehended and put into practice until at least one particular person has occupied himself with the problem of æsthetics, and has elevated the study of it to the rank of a science. No crowd, no nation, no multitude of undisciplined minds, can ever arrive at correct conclusions concerning such a matter. But just as a society is crude, insignificant, and lacking in a mouthpiece, unless it can produce great individuals, so also is the individual artist of small account unless his interests are conterminous with the interests of society, unless his creations not only satisfy the needs of society, but are given a form of which the beauty and utility can be made clear to everybody who has eyes to see and is capable of being convinced by an intelligible argument. The impersonal artist, avoiding both sentimentality and obscurantism, would never be placed in a false position; he would never be accused of trying to impose his own views upon other people, nor would he court unpopularity by maintaining that everyone who differed from him was lacking in an artistic sense. "This is not my own peculiar opinion," he would say, "but it is in accordance with an æsthetic canon which I have not invented but discovered. I have been brought to accept it by following a train of reason; and if you follow the same train of reason, it is possible that you will accept it too. But I do not seek to address you *ex cathedra*, nor to dictate to you your æsthetic tastes and beliefs."

If art is supposed to be the expression of individual temperament, then society is slighted, and takes revenge by ignoring the artist; if it be held that a work of art can only be the joint creation of many minds, then the individual suffers, and the springs of his ambition are dried up. It is only when art is regarded as impersonal that it can really flourish. Then the human intellect is treated with the reverence it deserves, and the individual has his proper status in society; he is not subservient, neither is he guilty of arrogance. And under these conditions society is not antagonistic to the artist. Such antagonism would then be unnecessary, for the artist would act in the name of society; it would also be utterly useless, because the artist (like the mathematician), by virtue of his impersonality would be invulnerable.

The prejudice against impersonal art is due to a certain confusion of mind. Such art is supposed to be inhuman. This will surely appear a strange view, when we consider that the capacity for intellectual
abstraction is a human characteristic. Those who
richly endowed with this capacity are more human th
those who are not, for the former, above all others,
distinguished by the very quality the possession
which differentiates us from the beasts of the fie
Besides, if we are going to establish degrees of em
nence we ought to give the palm to the men w
accomplish something which is difficult. It is a p
sort of race in which the prize is given to all! Wh
an artist follows the path of least resistance, indulg
in every wayward fancy, and then attempts to just
his conduct by telling us that art is nothing but se
expression, he declares himself to be a man of comm
clay. The ancient Greeks were surrounded by trib
whose feelings and instincts were as strong as th
own. But the barbarians could not formulate abstr
principles, so they made no permanent contribution
art. Vitruvius tells us that both Pheidias and Ictin
wrote elaborate treatises upon æsthetics.

Some critics contend that because Classic art
impersonal and intellectual it is therefore opposed
the modern spirit. If this opinion be correct, then
much the worse for the modern spirit. There is
need, however, to take this "modern spirit" very se
ously. We may even deny its existence altogeth
For if it is due to a dislike of intellect it does
deserve to be called "modern," and it certainly
nothing to do with "spirit." A most mischievo
movement of the present day, which, if it were allow
to grow in vigour, would have a disastrous effect up
the architecture of this country, is that which takes
form of a strenuous endeavour to oust architects fr
their present position, and to replace them by bands
craftsmen who in some mysterious way are suppos
to be capable of bringing architecture into a more in
mate relation with mankind in general. There is lit
danger of such a grotesque proposal being carried in
effect, for present conditions of building make it qu
impossible for the services of the architect to be
pensed with, but there can be no doubt that
doctrine of joint responsibility for the design o
building does great damage to the cause of archit
ture. It is obvious that these advocates care noth
for the virtue of unity in a composition, but imag
that there are other qualities more important. Wh
these qualities are they are unable to say with any
tinctness, but they give utterance to vague generalit
about democracy and the self-expression of
craftsman. But in their view this is at least clear—
tail must govern the head, and the untutored man
labourer is to determine æsthetic forms!

If the work of architects is open to criticism this
not because it is too impersonal or too intellectual.
the contrary, the public lack interest in it because
few modern buildings appear to be the expression
any principles at all. But if some of the obvious fau
or virtues which may distinguish a design were o
pointed out, if one or two simple rules concerning
employment of the most important architectural f
tures were firmly established, the status of our prof
sion could not but be improved. We should no long

er from neglect. People would have definite stan-
ds of judgment, and would take pleasure in testing
creations by them; the newest additions to our
ns would become the subject of animated conversa-
in the family circle. It might even be found that
ersonal art, besides being the noblest art and the
t profoundly human, would be popular as well.

A. T. E.

The Workmen's Compensation Act.

ASTER builders, as being (in the intervals of
industrial strife) the largest employers of synthetic labour, have been chief ong the
erers from the tentative and experimental legisla-
of recent years, the experiment usually wearing
general aspect of an attempt to ascertain how
h oppression they will really stand. In particular
r very considerable powers of endurance have been
y severely tested by the operation of the Work-
n's Compensation Act; and they may therefore
disposed to infer, from an answer to a question in
House of Commons, that their sufferings have not
n wholly in vain, and may perhaps, in course of
e, be mitigated. Mr. Ellis Griffith, representing
Government, acknowledged that the Act is beset
anomalies, agreed that there ought to be full-time
lical referees, and revealed the Government opinion
t a committee ought to be appointed to consider the
ninistration and operation of the Act, as well as to
e into account the relationships between this Act
the National Insurance Act, with a view to bring-
these into harmony. It is significant, and perhaps
ier ominous, that the motion for the appointment of
committee was put forward by two Labour mem-
s. An Act which thus evidently causes grave dis-
sfaction to both parties is clearly in need of drastic
endment; and employers, who have certainly most
son to complain of the vagaries and iniquities of the
, may be trusted to see that it shall not be revised
heir further detriment.

Antiquated Sanitation.

is surprising to be reminded, now and again, in
these go-ahead times, of the extraordinary back-
wardness of some of our large towns in the matter
anitation. For example, it is with somewhat of a
ck that one reads of such an important town as
ddersfield being in need of extensive conversions
the "water-carriage system." Huddersfield Pro-
ty Owners' and Ratepayers' Association are behav-
very nicely about it. Instead of protesting, after
too common custom of their order, that earth-
ets were the last word in salubrity, they contented
mselves with the very reasonable suggestion that
corporation might be prepared to bear a portion of
expense to which property owners would be put.
ely this would be no more than just, and the cor-
ation could afford to be generous in the matter,
ing that the water-carriage system would effect a
siderable saving for the sanitary department.
orms of all kinds would be much more easy of
omplishment if Imperial and local authorities pro-
ted them in a less arbitrary and more equitable
it.

Slum Dwellings and Slum-Making.

T a Local Government Board inquiry into the
application of Lincoln Corporation for sanction
to borrow £9,000 for the purchase of land on
ich workmen's dwellings are to be erected, one of
witnesses waxed wise on the natural history of the
n-dweller. This strange by-product of civilisation
ld not, he said, be abolished. If the slum-dweller
e shifted, he would make a slum of a palace: for
was not a working-man on a small wage, but a man
would not work. This is no new discovery of ghastly truths, and what it was intended to prove is not quite evident. If these phenomena were advanced as arguments against the demolition of slum dwellings and the substitution of decent housing accommodation, they are quite void of force, for they represent only a fragment of the truth. They ignore the vital factor of the regular reciprocity between the dweller and the dwelling. Just as surely as the slum-dweller makes slums, the slum makes slum-dwellers—nay, with very much more certainty, because it catches them young and corrupts them wholesale. Housing schemes may not work a miracle upon the incurable slumgullion, but they are invaluable for preventing his wholesale increase. Otherwise he has nothing whatever to do with the housing question. He is simply a study in morbid psychology, and should long ago have lost all his terrors as a bogey put up to scare timid souls from the paths of betterment.

"The Annual Ash-heap."

FIRE losses in the United States and Canada are still very heavy, in spite of improved methods of building construction. In the vivid phrasing of Superintendent Hasbrouck, of the American State Insurance Department, "the annual ash-heap of this country [the United States] and Canada shows little sign of diminution in the amount of property loss involved," the year 1913 being in this respect only about half a million dollars better than 1912, when 225 millions of dollars represented the money loss on fires. Not that fireproofing is a failure. There can be no question, the Superintendent declares, that this abnormal and tremendous waste "is due to conditions that should no longer be allowed to exist." It is hardly necessary to point out once more the real relation between the apparently contradictory facts that America is at once the home of perfected fire-prevention and of abnormally high fire-losses. The former has arisen from the latter: necessity being the mother of invention. Fire-prevention methods in America have been, indeed, extremely successful, as the gradually decreasing losses indicate very clearly when read aright. It is because the statistics are so often misconstrued that a reiteration of this point is opportune in every instance of their publication. To get at the truth, the "annual ash-heap" should be sifted.

Wren the Ruthless.

IS Wren also among the vandals? His doings at Hampton Court, as recently revealed, revive an old suspicion about him that he had but little veneration for the work of his predecessors. Mr. Ernest Law, in the latest of his many interesting "Times" articles on Hampton Court, mentions that in one of the suites of apartments hidden behind Wren's colonnade in the Clock Court, and identified as "Cardinal Wolsey's Lodgings," portions of Wolsey's beautiful ornamental ceilings were for 220 years hidden behind the Classic cornice "fixed round these rooms by Sir Christopher Wren to hide the gaps made by his ruthless removal of the friezes that must originally have formed important features in their decoration." Two fine stone fireplaces and other relics of Wolsey's day have also been uncovered in preparing the rooms for a new tenant. But these discoveries are quite superfluous as proofs that Wren was of the intellectuals. He was too much of a mathematician to be a mere sentimentalist—had too much confidence in the strength of his own individuality to care overmuch for work that represented what was, in his conception, a worn-out tradition; and there is the further excuse for him that the work for which he showed so little regard had for him 220 years less of antiquarian interest than it has for us, and was in his day much less rare.

Sacrilegious Arson.

PUBLIC indignation against the female fire-raisers found almost furious expression in the evening papers of last Friday, simultaneously with the announcement that another venerable church had been destroyed by the "sisters of Satan," as one writer called them. Not that Breadsall Church, near Derby, was very well known as an interesting specimen of Norman work, nor because a chained Bible and a monument to Erasmus Darwin perished with it, but because the bitter memories of a score of similar outrages were already rankling in the public mind. It is plain that these incendiaries must be dealt with. They have burnt down churches at Hatcham, Rowley, Whitekirk, Wargrave, and Breadsall, and have attempted to burn many others; and they have caused bomb explosions at St. John's, Westminster; St. Martin's-in-the-Fields, and the Metropolitan Tabernacle. That the scientifically constructed bomb they placed in the chancel of St. Paul's Cathedral failed of its fell purpose was a mere accident. They must be stopped from further depredations. What an American writer describes as our "mushy sentimental weakness and mistaken chivalry" amounts to criminal cowardice when it ineptly tolerates wholesale arson. The Government can no longer afford to neglect its plain duty to stamp out these barbaric and disgusting crimes against civilisation.

Brighton "Improvements."

BRIGHTON is refurbishing its Pavilion—surely the oddest building freak in the kingdom—and is about to enlarge its Palace Pier bandstand, but it has not quite decided what to do with its Aquarium. For the moment, the prevalent notion is that it might be fitted up for the accommodation of a large band; but not even the sirens of the caves could attract people underground to hear music at a place like Brighton. It is a mistake to erect buildings of any sort—except, perhaps, the rather useful shelters—on a seaside promenade, and this consideration should decide the fate of the Brighton Aquarium. Brighton is unfortunately not alone among seaside resorts as being, on its building interest, a place to shudder at. Its fine old "Ship" Hotel, with its quiet Georgian dignity of simplicity, ought to have given the cue for a really beautiful Brighton. Instead, it now serves as a silent reproach to the general blatancy of the buildings on the front. The pity of it, that our seaside towns should, as a rule, merely corrupt the taste which they have such extraordinary opportunities of elevating! Town-planners should make a dead-set at seaside corporations, whose burgesses are particularly in need of elementary education in civic amenity.

Labour Crisis Developments.

THE daily Press has invested with quite sensational but wholly factitious importance the announcement that the Theosophical Society's building in Tavistock Square was to be completed by direct labour. There is nothing novel in the incident, and it cannot be regarded as having any particular significance. Its effect on the existing dispute is regarded by the employers as being almost entirely negligible; and that it portends "the elimination of the contractor" is sheer moonshine. If the London County Council and other municipalities have found to their cost—or, rather, to that of the unfortunate ratepayer—that the contractor is indispensable, the private owner is likely to realise this truth still more poignantly. The point is dealt with in greater detail on page 418. A more significant development of the situation is the marked disposition of certain of the unions to break away from the Federation and treat separately with the employers' organisations.

THE PLATES.

VARIETY of architectural interest is ensured the classification of our plates into sepa series, and those appearing this week sh rather strikingly, by their harmony in diversity, one the chief advantages of systematic presentati another being, of course, the facility afforded for p serving the plates in distinctive portfolios which be obtained from the publishers.

Current Architecture. LXVII.—Prince of Wa Picture House, Clayton Square, Liverpool. Geo L. Alexander, A.R.I.B.A., and Matthew Wat Landless, and Pearse, Architects. The building, which we show the front elevation and a working dra ing, is one of a group of theatres belonging to Mes Provincial Cinematograph Theatres, Ltd. The fro which affords yet further evidence of the adaptabi of Classical design to modern purposes, is executed "Marmor" supplied by the Leeds Fireclay Co. T iron shelter, which we understand to be an addition the original design, was executed by the Falkirk I Company. The entrance is panelled in oak. T general contractors were Messrs. McLaughlin a Harvey, of Belfast, and the fibrous plaster work executed by the Bromsgrove Guild.

Empire Vase at Fontainebleau.—Of graceful p portions, and showing vigour as well as delicacy in ornamental detail, this vase, while sufficiently rich decorative features, shows none of the over-exubera that is sometimes associated with its period.

Students' Drawings. XIX.—Temple of M Vengeur. By B. Chaussemiche (Grand Prix Rome). The ruins of the Forum of Augustus w excavated chiefly in 1888-9. On its east side was Temple of Mars Ultor, vowed by Augustus in his against Cæsar's murderers, and consecrated B.C. 2, which three very beautiful Corinthian columns, part the colonnade on the right side of the temple, w unearthed. M. Chaussemiche's exquisite drawing reproduced by courtesy of the Department of Arc tecture, Massachusetts Institute of Technology.

Small Houses of the Late Georgian Period. XII Pair of Semi-detached Houses, Esher, Surrey. Bu in the early part of the nineteenth century, when th were no troublesome by-laws insisting on party-wa being projected through the roof, these quiet a retiring houses afford a striking contrast to many our "desirable" modern villas which disgrace nea all the more recent of our suburbs. One of the featu of the design is the skilful way in which the two fro doors are grouped together to form one feature. T imitation stone-joints in the cement rendering are mistake, and originally the houses were finished w smooth white plaster.

Cottingham's Designs for Ironwork. XV Lamps and Stands, Candelabra, Tripods, Vases, a Various Ornaments. All Cottingham's work is d tinguished by an exquisite sense of form, whi redeems them from any suspicion of the heavin that commonly results from over-elaboration. In t present plate the general treatment reveals ve convincingly that an artist who is thoroughly imbu with the Classical spirit need be by no means bondage to it.

Working Drawings by Well-known Archite (New Series). XXVIII.—Prince of Wales Pictu House, Clayton Square, Liverpool. This drawi shows the detail of the front of the picture-hou described above.

Practical Chart of Town Planning Procedu —This is the first section of the chart for schem prepared by owners. A full description appears in t article beginning on page 412.

HERE AND THERE.

HE express train offers a new point of view from which to survey architecture, a point of view essentially modern. In an age of speed there are few ditions that foster contemplation, but when travel- by rail at fifty miles an hour a sense of quiet steals r the mind. Though in the midst of rush, we find at last to gaze leisurely at things, perhaps to osophise. Seated comfortably in your luncheon you can form a new estimate of town and country dings and gain a rapid view of successive types of k. Architecture as viewed from the carriage win- thus acquires a fresh interest. The traveller going, instance, from London to Glasgow, from the South ngland to the North, has a remarkable panorama olded before his eyes, nothing being more notice- than the change of effects and methods of building ing from the use of local materials. Thus, in the hern counties you will see all the charm of beauti- brick and tile work, cottages and farmsteads with ving red walls, with lichen-covered tiles on the s—or, occasionally, thatch—and sturdy chimneys g above the centre of the ridge or corbelling up gable. As the Midlands speed by, the work loses in rest. The brick is more bricky, and is coarser in earance, and slates give a duller tone to the roof. l then come towns smoke-begrimed, sprawling, and have that appalling vista of backyards which dis- uishes all places where industry is the dominant or in existence. And the effect becomes worse as train speeds by areas devastated by tips and refuse s, where gaunt chimneys belch forth smoke, and rows of houses are set higgledy-piggledy in the st of desolation. Beyond, again, is the country, lually resuming its beauty as the town recedes, until farms are seen here and there, with acres of land uilt upon, causing one to think that a better end ld be attained if only people could be spread out in country surroundings instead of being piled crushed together in the squalor of towns; but that erely a philosophic thought, a futile thought, such e express train engenders. In this train, indeed, look upon humanity as one might study a hive ugh a glass cover, and thus placed we are as com- ely detached from what we see as the visitor in one ose great hotels in the Swiss mountains, where, as Arnold Bennett has described, one finds, within, all features of the hotel of London, Paris, Liverpool, burgh—central heating, lifts, the latest political s, billiards, cut flowers, rich foods—and, without, stark Nature of rock and snow and ice which is art of the piece of townbuilding that a limited lity company has thrust upon it. And, to a certain ee, the same thought comes into the mind as one es through a country in an express train. After Midlands one reaches Derbyshire, and there, with rent local material at hand, we see a change in e building. Blocks of beautiful stone now take place of bricks for walling, and stone slates form roof-covering, their weight causing the timbers to adding a piquancy which is fascinating when produced in a natural way—quite different from wavy ridge lines which the architect in a hurry es to delight his client with. And then from yshire we go through Lancashire, passing more s where ugly brick houses, smoke-begrimed, fy to the depressing power of mechanical stry; then the country once more, with houses different in appearance from those we have yet ed—stone houses whitewashed, and roofs covered slates of a very pleasing grey-blue colour, houses h look well in their setting of green, with hill and around them. We may espy, too, dry stone walls lace of the hedges of the southern counties, a re which continues as we go farther south. Stone now becomes the predominant material for all buildings, its use being most noticeable as the train arrives in Glasgow, and we see tenement buildings with great blocks of ashlar in the walls. This is perhaps the chief point of distinction between the North and the South, the one built chiefly of stone, the other built chiefly of brick. And terminating this brief survey at the great Scottish city we may note, opportunely, that Glasgow has only one Portland stone building—the head office of the Northern Assurance Company in St. Vincent Street, of which Messrs. Campbell and Hislop are the architects; a building whose elevation recalls the fact that in Glasgow the buildings can rise to a height equal to one and a half times the width of the street, the limit of height (attained by many of the buildings) being 100 ft. This measurement is taken to the ridge of the roof, but architectural embellishments like turrets and spirelets are permitted in addition, which explains why Glasgow can boast more high buildings than any city in the provinces.

* * * *

We are now quite accustomed to the specialist, even in the architectural profession, for there are hospital architects and theatre architects, asylum architects and brewery architects, to mention a few; but a fresh star is rising in the firmament, and Mr. Mark Allerton has heralded the phenomenon. In last week's issue of "Land and Water" the golf architect is discussed at length, his temperament outlined, his qualifications analysed, his possibilities indicated. Golf architects, Mr. Allerton informs us, are born, not made. "There are no extension lectures on golf-course architecture. No degrees are granted for passing examinations on the laying out of links, with honours, say, in the construction of short holes or in the placing of pot bunkers." So that any of my readers who are still awaiting the arrival of the rich client may look forward to a new land of hope and commission, if only the right spirit is within them. But the qualifications of the golf architect are many and severe. Here is the list: He must have a knowledge of surveying, botany, land values, geology. He must know almost all there is to be known about grasses, fertilisers, composts, and the preparation of seed beds for various soils. And in addition to all this he must possess imagination and a hide that is impervious to the sharp arrows of criticism. Mr. Allerton gives us the recipe for the golf architect. "He must be made up of one part poet, one part man of action, one part golfer, the whole well mixed together and flavoured with ruthless enmity to the man who is scratch and who ought to be three, and some indulgence to the indifferent player, plenty of self-confidence, and a well-pronounced manner of authority." Whether even a F.R.I.B.A. could compass all these virtues remains to be seen. There are plenty of golfing architects, but not yet, so far as I know, a golf-architect member of the Institute. Perhaps a new class will be created, who will go still further to swell the Institute's ranks for the promotion of a Registration Bill, but who must remain meek and docile when anything is said about voting powers. Besides, the super-golf-architect will not only spy out the land and arrange it—people being no longer satisfied with golf "in a state of nature"—but he will gather into his net all the jobs that are the concomitants of a popular course. "Formerly the golfers came first and the course came afterwards. Now it is the course that comes first, and very quickly there flocks to the district a colony of golfers, for whom houses and shops and streets are built, until a new town springs into being." Here are possibilities indeed for the man of enterprise.

UBIQUE.

METROPOLITAN WATER BOARD OFFICES COMPETITION.

IN December last the Metropolitan Water Board decided to erect new central offices on a site in Rosebery Avenue, and six firms of architects were invited to join in an architectural competition. The assessor, Mr. E. Guy Dawber, F.R.I.B.A., has now delivered his award as follows: 1st, Mr. H. Austen Hall; 2nd, Messrs. Henry T. Hare and H. S. East; 3rd, Mr. E. T. Hall; 4th, Mr. T. Edwin Cooper; 5th, Messrs. H. O. Ellis and Clarke; and 6th, Messrs. Brown and Barrow. An exhibition of the designs was held at the Water Board's offices, at Savoy Court, in the Strand, and closed on Saturday last.

Few of the designs can be said to have reached a very high architectural level. Except for Mr. Austen Hall and Mr. Edwin Cooper, none of the competitors has produced a design that does complete justice to the site and to the important function which the building is to fulfil.

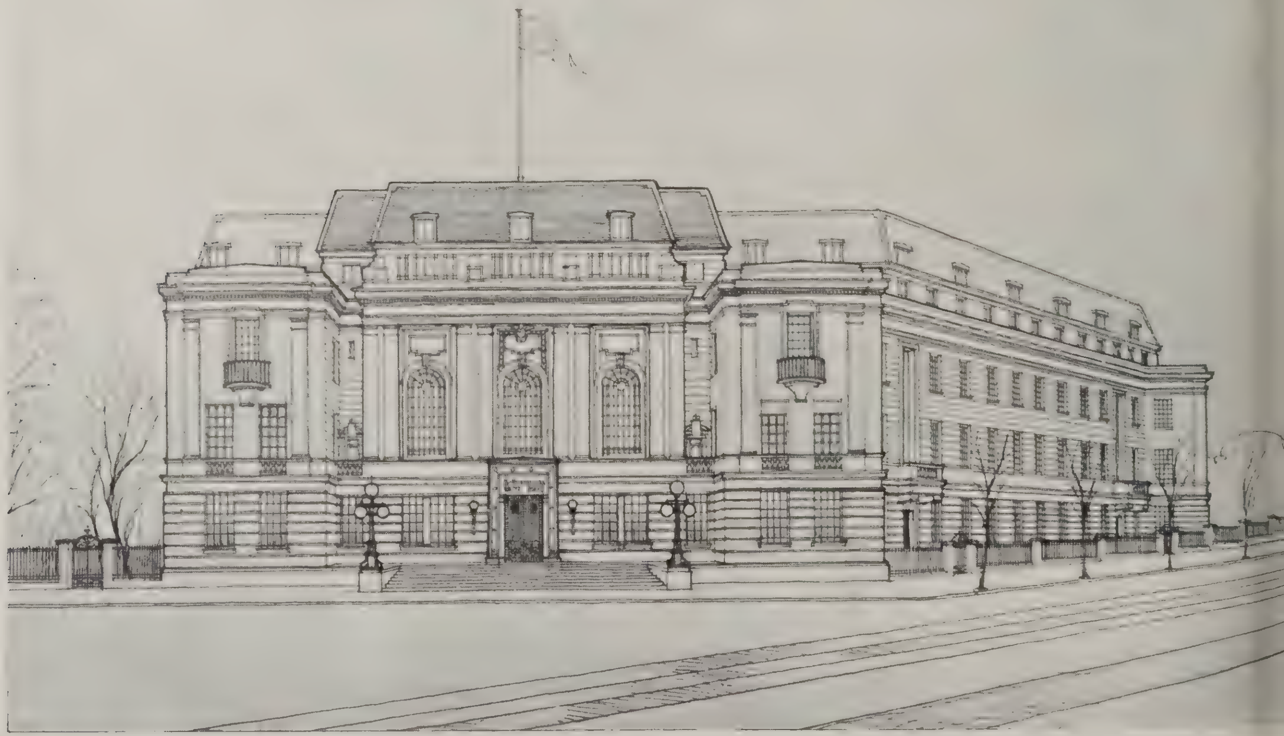
From the point of view of architectural composition many would prefer Mr. Cooper's design, which is really a fine monumental conception; Mr. Hall, however, has produced so clever a plan that the assessor could have had no hesitation in awarding his scheme first place.

The site is quinquangular in form, and presents only a short side to Rosebery Avenue. Its peculiar formation rendered it capable of at least three distinct treatments, all of which have been attempted. Briefly, they may be set down as follows: The main axis might be taken, first, from the apex of the angle towards Rosebery Avenue; second, from the middle of the front along that thoroughfare; and, third, from the lower short side of the site, which faces almost directly south. This last method has been adopted by Mr. Austen Hall, and with great success. He has produced a plan which is remarkably direct and convenient, consisting of two figures—a rectangle and an isosceles triangle. In the former he accommodates all the important departments of the building, including that of the rental ledger clerks, board-room, etc., devoting the latter to offices of minor importance. The c objection to this arrangement is that the build presents what is really a side elevation to Roset Avenue, the principal entrance being actually at side. The advantage gained, however, is that most important front faces in the direction of the m line of approach from central London. Incidenta also, it can be seen down the whole length of Garn Place. The failure of other competitors to evolve equally satisfactory composition by the adoption of alternative methods above mentioned justifies both Hall in his arrangement and the assessor in his cho

A point that should be noticed about Mr. Hall's p is the way in which awkwardly shaped rooms avoided by placing the subsidiary staircases in angles formed by the junction of the rectangular w the triangular body. The arrangement of the corric around the light wells is also to be commended.

Mr. Hall has avoided all pretentiousness in elevations, which rely for effect on good propor rather than elaborate detail, from which, indeed, design is altogether free. One or two rather unsa factory features are apparent, but these will proba be eliminated or corrected in the final drawings. small projecting balconies on the wings of the entra front, for instance, are not only superfluous altogether out of keeping with the general chara and purpose of the building. Another slight de is to be seen in the top windows of these same wi the mouldings of which cut uncomfortably into architrave above. With these defects remedied, entrance front, with its well-proportioned windows dividing pairs of pilasters, with its dignified door and bold flight of steps, should look very satisfac in execution.

The return front to Rosebery Avenue is simply broadly treated, and possesses considerable interes a piece of design which depends mainly on fenestra for its effect.



METROPOLITAN WATER BOARD OFFICES COMPETITION: PERSPECTIVE OF SELECTED DESIGN.
H. AUSTEN HALL, F.R.I.B.A., ARCHITECT.

he possibilities of future extension have received :ul consideration. The design allows for the tion of a complete storey in the roof, while ɜaring as a finished building without it. The pective drawing, which we reproduce, shows the :t of these alternatives, the roof extension being :ated in outline only, and the portion to be com- ɜd at once in darker lines, with a suggestion of the :s.

he famous oak room, which the Water Board red to be incorporated in the new building, has ı reconstructed as a members' room adjoining the d-room, the intention being to replace it in exactly resent condition. The positions of its windows, s, and fireplaces have been carefully retained.

he external walls on the south and south-west ations—that is to say, the principal one and that h fronts on Rosebery Avenue—are to be faced Portland stone, the remaining sides to be in <, with stone string-courses and window-sills. gether, the winning design affords a good solution ıe various problems presented, and Mr. Hall is to ongratulated on his success.

essrs. Hare and East submit a design of the iliar colonnade type, with the customary small ments over windows. It has a certain heavy lity of effect, which is intensified by a strong cated basement; but it makes no departure from conventional style of modern "English Renais- e." The three rather meaningless towers imposed he more important angles would have been better ted. The authors of this design have placed the ı entrance on the apex of the angle towards Rose- Avenue, and consequently their planning is nged on an axis at right-angles to that of the ıing design. A good and straightforward plan, ever, has been evolved.

r. E. T. Hall submits a design in the English aissance manner, but of a rather commonplace . Like the winner, he has put his principal eleva- on the end facing south; but he has not pre- ed that rectangularity of plan which is such an llent feature of the winning design.

he design submitted by Mr. Edwin Cooper (an y in Neo-Grec) is, as we have said, from the architectural point of view, the best of the set. Like the winner, he also makes the south elevation his entrance front, which is treated in a fine monumental manner. It consists of three bays, the middle one (approached by a flight of steps) being divided off from those on either side by massive pilaster-like blocks of masonry, supplemented by columns, of which there is a range of eight in all. The capitals to these are of a heavy Ionic type, somewhat similar to that which Professor Beresford Pite has so successfully employed in his London, Edinburgh, and Glasgow Assurance building in Euston Road. The order embraces the ground and first-floor storeys, the third having a series of corbel-like features between the windows. The plan follows largely on the line of the winner's, differing from it mainly in having axial communication with the main block from the apex of the angle towards Rosebery Avenue.

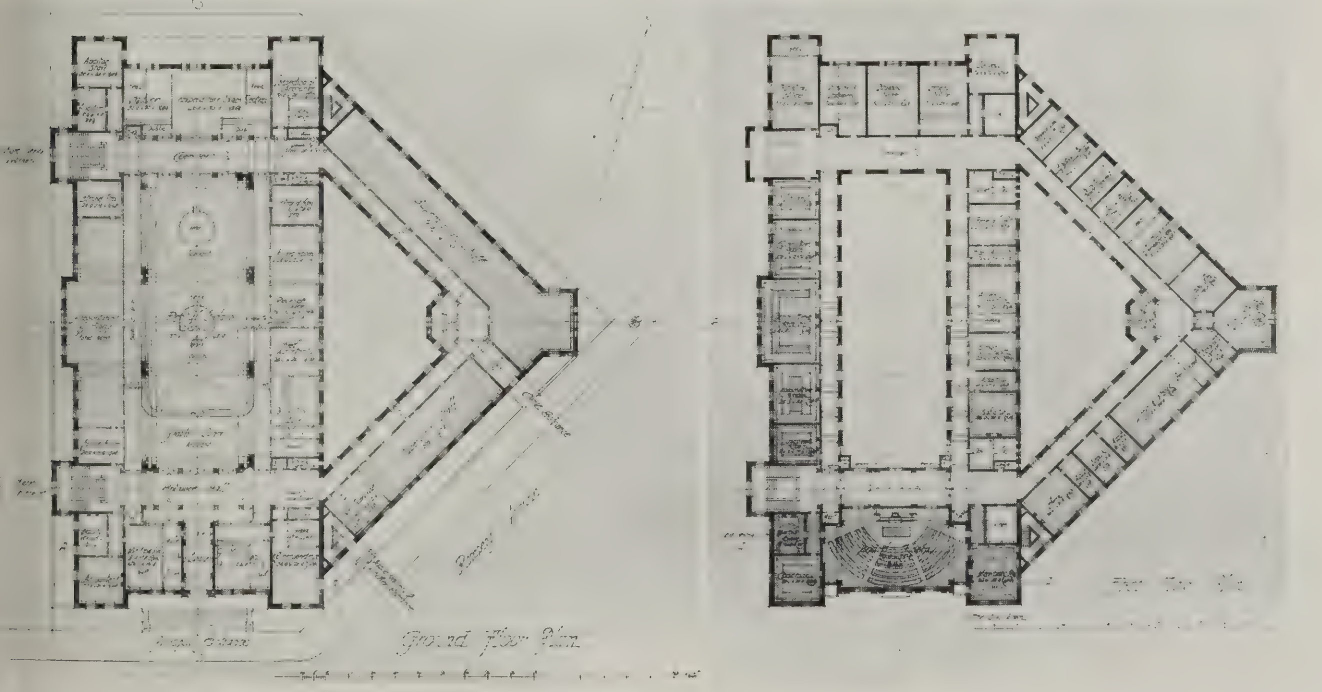
In the design by Messrs. H. O. Ellis and Clarke the fenestration is not conspicuously effective; and the placing of the principal entrance on the front of Rosebery Avenue has resulted in a rather unsatisfactory plan, which is almost altogether lacking in axiality and balance. Its chief defect is that the corridors, arranged throughout with offices on either side, would be so very dark that artificial illumination would have to be constantly employed. The best feature of the plan is a fine big octagonal space for the rental ledger clerks.

Messrs. Brown and Barrow put their principal entrance on the south front, and have a prominent semi-circular feature on the apex of the angle towards Rosebery Avenue, thus producing a dual emphasis which is rather confusing. The main entrance, too, is very puny, and altogether out of scale with the rest of the building. A good feature of the plan is the provision of a large space for the rental ledger clerks, with ample accommodation for the public.

In the foregoing notice it has been possible to give only a bare descriptive outline of the unsuccessful designs, all of which possess many features of considerable interest. The merits of the winning design, however, may be judged from the accompanying illustrations.

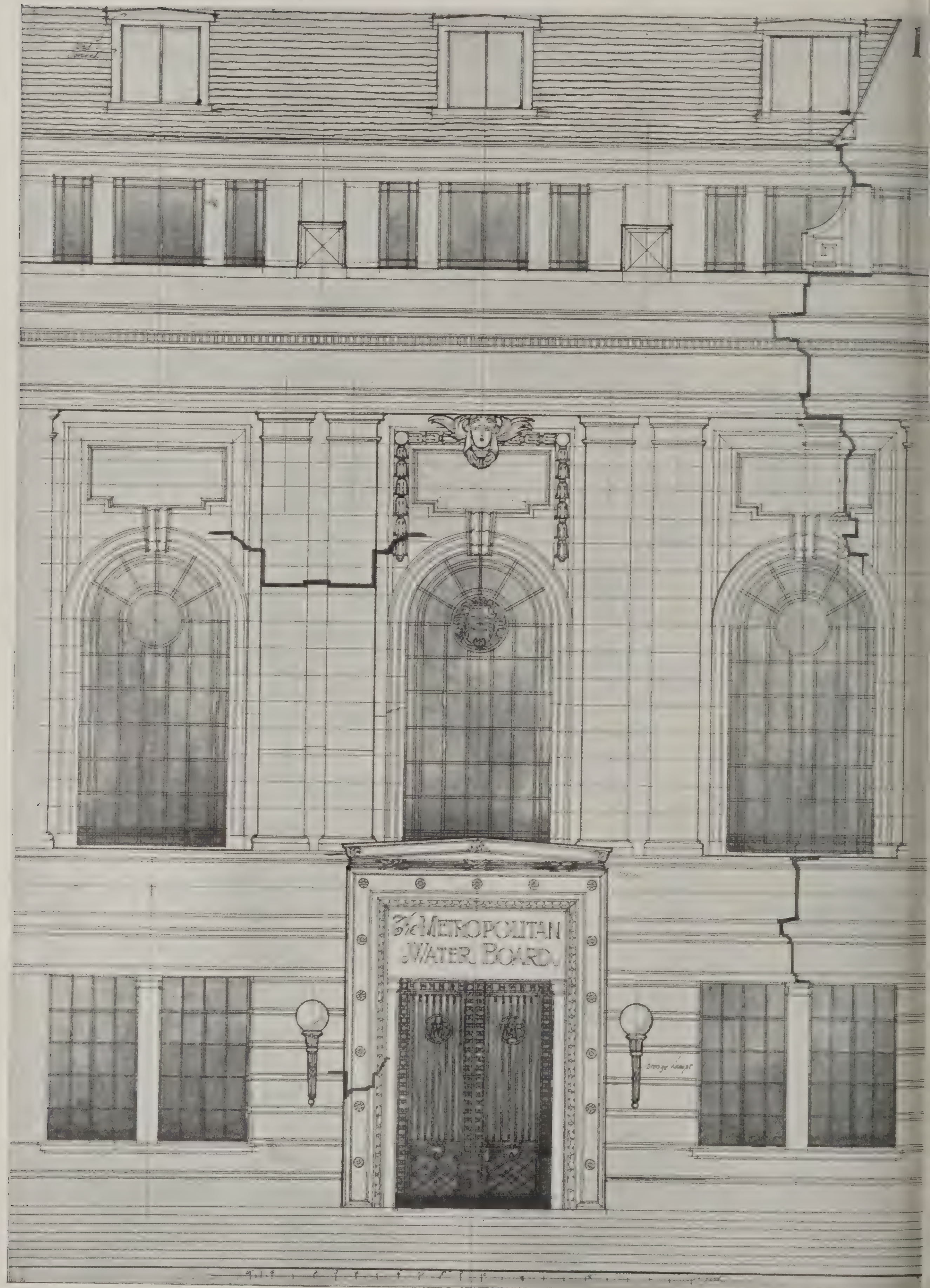
The building, it may be added, is estimated to cost about £90,000.

G. J. H.



ᴍETROPOLITAN WATER BOARD OFFICES COMPETITION: GROUND- AND FIRST-FLOOR PLANS OF SELECTED DESIGN.

H. AUSTEN HALL, F.R.I.B.A., ARCHITECT.



METROPOLITAN WATER BOARD OFFICES COMPETITION: DETAIL OF PRINCIPAL FRONT OF SELECTED DESIGN.
H AUSTEN HALL, F.R.I.B.A., ARCHITECT.

THE ANGLO-FRENCH EXHIBITION OF ARCHITECTURE: TWO VIEWS—FRENCH AND ENGLISH.

SPECIALLY CONTRIBUTED BY (I.) EUGENE BOURDON AND (II.) A. W. S. CROSS, M.A.Cantab., V.P.R.I.B.A.

I.

is not merely from a desire to compliment the British architects that I say, first of all, that the general feeling both of professional men and the ide public towards this exhibition has been that of iration. Our own architectural exhibitions, very l in themselves, do not attract the public at all; and British Exhibition, made up of lovely water-colour ings, pen-and-ink perspective, and first-class ographs, has been a revelation to all of us. We no idea before that an architectural exhibition it be a subject of deep interest to people outside profession.

he French public are nearly always most interested ie retrospective side of an exhibition of this kind. many amongst us spent a lot of time in front of splendid collection of photos of old mansions, es, churches, etc., of the sixteenth, seventeenth, eighteenth centuries. Many of us had travelled reat Britain, and were glad to renew our acquaint- with examples of the Old English styles. The ch architects who were unfamiliar with English tecture were very much taken by the quaintness of Tudor and Jacobean buildings. Those who had ed the various English styles, however, preferred nore dignified compositions of the seventeenth iry. Quaintness and humour in architecture is to appeal to our fancy, and it is interesting use it is new to us. But in the long run we back to our own nation and taste, and prefer the Renaissance work, full of restraint and dignity. in this later style, admiration does not forbid ch architects to criticise, here and there, faults in proportion, composition.

enchmen simply love English gardens. They are ject of deep interest to French architects as sup- ng our own idea that only formal or achitectural ning should be used close to our buildings.

ieard some quite severe criticism on the section ed to nineteenth-century masters. Some of my igues did not at all approve of the so-called ic of the Revival—the more so when this Gothic supposed to be French Gothic, or followed too y the lines laid down by Viollet-le-Duc.

ave already said that the British way of presenting xhibits was greatly admired. I had to explain to of my countrymen the British system of profes- l draughtsmen, like Mr. Gascoyne and Mr. Alex. ibbon. They were much interested. In the al section our fancy was drawn first to the cottage the comfortable English home, the quaintness of decidedly British details. The general opinion, ver, was that all this is certainly pretty, charm- vely, but it has not the serious and deep qualities venteenth-century English Classic. We con- that the latter was the line along which British ectural tradition ought to continue. All to a disapproved of some attempts to copy French . We feel that an exhibition of this kind should ad to a silly imitation of one another's forms and , but should result in both of us striving to do , each one in his own line.

he Frenchmen admired British domestic archi- e—some preferring the early English domestic tage-like type, and others the gentleman's house "grand epoch"—I overheard severe criticisms as public buildings are concerned. Some do not like erflowing details, etc., which are a sort of Gothic iscence in Classical compositions. Some do not ve of the abuse of some purely British features, s the projecting "porte-cochère," etc. Most of us found fault with the proportions or the composition. All the criticisms may be summed up in three words: Lack of study.

We honestly believe that our British friends would do excellent work if they were properly *trained to study*. We feel that an education like that we receive in the Beaux-Arts School would give them the only thing they lack, the mastery of study. Our Beaux-Arts system of education is merely a method. It does not aim at imparting a particular style; derived from Italian methods, it is cosmopolitan rather than properly French. Britishers who would follow it would greatly improve their power of composition, without diminishing any of their splendid personal or national qualities. The work, essentially Scottish, of four of our Scottish friends who were trained under M. Pascal in the Ecole des Beaux-Arts is witness to the latter fact.

The Educational section interested many of us for the above reason, also because nearly all the leading French architects take part in the E.D.B.A. teaching as heads of an Atelier of Architectural design. We were much interested in the progress made by schools following the new ideal—the ones in which a good deal of attention is given to architectural design. Some of the British students' work is admirable. I heard only criticisms as to the signs of haste in some of the studies, and certainly the English student is not sufficiently trained in the art of using tracing paper and of studying a scheme to the limit of its possibilities. Other remarks were passed on a certain snobbishness which leads the young Britisher to make Frenchy architecture and to use too slavishly the plates from the D.B.A. concours. It is not in that way that our methods should be used. Let our educational system help you in the improvement of your schools, but do not let our styles cross the Channel. Just as Italy continued to nurse our French artists for centuries after the creation of a French style and of our French school, so, in addition to being trained in your own schools, let the best of your young men come over here, learn in Paris our methods of study, and then let them go to Italy and Greece and measure the best examples of architecture there—and the future of British architecture will be all the better for it, and no less British.

EUGENE BOURDON.

[We print Professor Bourdon's communication, which was obtained for us through the kind offices of an intermediary, substantially in the English form in which it reached us. Some slight curtailment has been made, and a few minor alterations effected, but care has been taken to avoid impairing the value and interest of a representative Frenchman's views on the British exhibit.]

II.

THE comprehensive and varied nature of the examples collected to illustrate the sections of the exhibition that deal exclusively with the domestic architecture of this country from the end of the Middle Ages until the establishment of the later Renaissance under the House of Hanover, makes this historical display one of supreme importance. And the gradual development of the English country house of to-day from the feudal castle of the Middle Ages can be traced, almost step by step, in the splendid series of more than 100 illustrations included in sections VI., VII., and VIII., which have been arranged with special reference to the progress of English Domestic Architecture.

It was towards the end of the thirteenth century that the castellated mansion of this country gradually began to assume a more domestic and peaceful aspect, and that the desire for increased comfort was observable in the planning and construction of the larger houses of the period. In the succeeding century this tendency was marked by a further development, when a higher state of civilisation and greater refinement effected considerable changes in the plans of large domestic buildings. The gatehouse or entrance of the typical house of the period led into an open quadrangle, in which stood the projecting porch of the large hall, with its adjoining kitchen, buttery, and store rooms. Wing buildings, flanking the sides of the quadrangle, contained dormitories for the servants and the solar with its cellar projected from one end of the hall, and near it was the chapel. The diminution of the hall both in size and importance is a characteristic feature of the domestic architecture of the fifteenth and sixteenth centuries. At that time it had ceased to be reserved exclusively for banquets; ceremonial state dinners had become less popular, and additional living-rooms were usually provided to enable the master of the house and his family to dine in private. Thus, whilst still retaining, to a certain extent, its original importance, the large hall was gradually losing its utilitarian character. But its plan was not greatly altered, as the raised daïs with the head table arranged transversely, and the ordinary benches and tables longitudinally in the body of the hall, remained as of old. The windows, now glazed, were much larger than those of the fourteenth century halls, and the oriel window at the side of the daïs was continued up the full height of the hall. An elaborately designed fireplace replaced the simple hooded recess of former times; and wide oak staircases, resplendent with carved balustrades and newels, superseded the ancient narrow winding stairs. Domestic chapels still continued to be important features of English mansions, and the kitchen arrangements remained as before; but so many additional rooms were added that the former distinctive character of kitchen, buttery, and pantry were lost.

The transition from Gothic to Renaissance architecture appears to have been brought about in this country through the influence of the Italian artists brought to England by Henry VIII. or Wolsey to execute the carving at Hampton Court and the palaces of Nonsuch, St. James, and Whitehall. Thus traces of Italian art can be seen in fragmentary form in English buildings of a distinctly Gothic character—for instance, in the Gate house and Clock tower and other parts of Hampton Court, illustrated by exhibits 11 to 13; and in Sutton Place, Surrey (8), built by Sir Richard Weston about 1525.

On the other hand the Town Hall at Lavenham, Suffolk (9), of the same period—a fine example of a timber-framed structure of its time—shows no traces whatever of Renaissance influence. Compton Winyates, S. Warwickshire (14), built about 1570, is another example of a typical English home of the period which owes nothing to foreign art. Haddon Hall, Derbyshire (10), one of the most perfect types of the ancient domestic work of this country, represents, in its present form, many phases of English architecture from the twelfth century to the seventeenth century.

In Elizabethan times the fortified dwelling of the Middle Ages had almost entirely disappeared; windows had increased in size and number, and the English mansion of the day was surrounded by magnificent gardens. The pioneers of Renaissance art in this country—the Italian craftsmen of Henry VIII.'s time—had left the country, and their places were taken by German and Flemish workmen. In this reign, when national tradition in architecture succumbed to foreign influence, the result was apparent in the coarse Renaissance details, of a Germanic type, shown in the ornamentation of the period. Under John Thorpe, v was employed to superintend the erection of anc some cases perhaps to design, several of the la houses built during the reigns of Elizabeth and Ja I., house-planning made considerable progress. At commencement of the sixteenth century the room most of the large dwellings were arranged round or more internal courtyards and approached throug gateway centrally placed in the main façade. later this quadrangular plan enclosed on all sides superseded by one in which the house was arrange three sides of the entrance court. Under this arrar ment the principal entrance usually became a jecting bay in the centre of the main façade, and combination with two well-emphasised wings, for the popular E shaped plan. A further developm resulted in the extension of additional lateral wi from the back or garden elevation which gave a shape to the building. The special characteristic early Renaissance architecture in England copiously illustrated in the present Exhibition tracings (numbered 22 to 30) made from the Th Collection of Drawings in the Soane Museum. T examples include drawings of Wollaton Hall (23), (and (25) and the plans of Burghley House (26) between the years 1556—1587.

Equally interesting is a series of photographs ta from the drawings of Thorpe's contemporary worke architecture, John Smithson, who died in 1634. collection includes illustrations of Kirby Hall (erected between 1572 and 1575. Hardwick Hall built by the celebrated "Bess of Hardwick" in 15 and remarkable for its symmetrical plan and large numerous windows. Hatfield House (44), a g example of a nobleman's mansion of the Jacob period, and Barrington Court, Somerset (54), w notwithstanding its Gothic style, shows by symmetrical arrangement of its plan that it belong the Elizabethan period.

In 1625, with the accession of Charles I., Ita influence once more asserted itself in England, coeval with the matured Palladianism of Inigo Jo the foundation was laid of a sound architect tradition, which in spite of vicissitudes of all kinds endured to the present day. On the death of I Jones in 1652 his pupil John Webb completed master's unfinished buildings and carried on the g work, and thus made possible the expression of genius of Wren. The influence of Wren bega disappear towards the second half of the eightee century, and the signs of a coming change in the a tecture of the country were intensified by the pub tion, in 1762, of Stuart and Revett's book on " Antiquities of Athens." The influence of this led to the enthusiastic study of Greek architecture; although the old English tradition was loyally follo by Sir William Chambers in the erection of Some House, yet the divergence from Palladian model the equally successful contemporary architects, brothers Adam and other leading men, resulted in introduction of a style essentially Greek in origin.

Many of the works of Sir John Soane (1750-1 exhibit marked individuality and considerable di gence from the traditional style introduced by I Jones and continued by Wren. University Coll Gower Street, and the National Gallery in Trafa Square, both designed by Wilkins, the British Mus by Sir Robert Smirke, and St. George's Hall, Li pool, by Elmes, all show more or less the influenc Greek art.

The nineteenth century saw the disastrous co brought about by the Gothic Revival, the resu which was of a chaotic nature. It is, however, s factory to know that we are now once again wor on the lines of our great national tradition. L Renaissance architecture in this country is well l in the present exhibition by selections from the ; of Inigo Jones, Wren, Gibbs, Chambers, the ers Adam, and other architects of the period. As ples of successive developments, the following its are of special interest—viz., (57) Design for e of Whitehall: In this huge scheme Inigo Jones ged the blocks of buildings round seven large yards, two of which were arcaded. Judging from upreme excellence of the Banqueting Hall—the part of the design that was carried out—the result have been a masterpiece of palatial architecture. Queen's House, Greenwich: Built by Inigo Jones en the years 1619 and 1635, this building shows y that its architect's powers of design were well vance of those of his English contemporaries. Hampton Court: This exhibit illustrates the large ons to this palace made by Wren in 1689 and quent years. (89 and 92) The Orangery, Ken- n Palace: Wren's genius for the architectural nent of brickwork is well shown in this charming ng. (90 and 91) The Library, Trinity College, ridge, is another excellent example of Wren's ile methods of design. (90a) Examples of the of James Gibbs (1682-1754) are shown in its 90 and 100, the former illustrating the interior Senate House, Cambridge, erected in 1722, and atter the Radcliffe Library at Oxford, built en the years 1737-47. Meantime, excellent was being done in some of the more important ncial towns—notably in Bath, where many of the ectural improvements then taking place were the direction of the Woods, father and son. Park, Wiltshire (94), a stately mansion occupying mmanding position at the head of a valley and oking the city of Bath, is a typical example of ork of John Wood. It was constructed for Ralph in 1736. The staircase leading to the terraces ter addition.

be quite frank, the section of the exhibition ed to modern architecture is disappointing. And eling of disappointment is accentuated by a hasty nce to the catalogue, from which it becomes quite nt that comparatively few well-known architects failed to send examples of their work. Indeed, epresentative nature of the exhibition is shown isively by the following list of contributors, viz.: s. H. Percy Adams, Ashley and Newman, Frank son, Austin and Paley, F. T. Baggallay, Baillie C. E. Bateman, Adrian Berrington, W. H. Bid- Reginald Blomfield, Blow and Billerey, Brierley, Downing, Burnett, Caröe, Cart de Lafontaine, r Cave, Basil Champneys, Collcutt and Hamp, well, Cross, Raffles Davison, Dawber, Dunn and on, Field and Simmonds, Banister Fletcher, ner and Pinkerton, Flockhart and Guthrie, th and Maule, George and Yeates, Curtis Green, islade, E. T. and E. S. Hall, H. T. Hare, Harris Moodie, A. and H. Hill, Gerald Horsley, H. Ince, Graham Jackson, T. J. Joass, Campbell Jones, r Keen, S. D. Kitson, Ralph Knott, Lanchester Rickards, Lucas and Lodge, E. L. Lutyens, enzie, Mallows, May, Mitchell, Mewès, and , Temple Moore, Ernest Newton, Nicholson, and tte, Barclay and Wigglesworth, Parker and n, Pepler and Allen, Beresford Pite, W. Pite, ice, E. S. Prior, Fellowes Prynne, Quennell, ine Walker and Jenkins, Reilly, Schultz, F. M. Simpson, Smith and Brewer, s, Tapper, Sir A. B. Thomas, Troup, n, Voysey, Warren, Waterhouse, Warwick and Sir Aston Webb, Maurice Webb, T. M. Wilson, '. Worthington. Official architecture is repre- d by numerous drawings and photographs contri- by Sir Henry Tanner and Mr. W. E. Riley, and ottish section comprises examples of the work of R. Anderson, Hippolyte Blanc, Washington ne, Burnet and Son, W. Leiper, Sir Robert Lori- Marshall Mackenzie, A. W. Paterson, J. A. Morris, J. B. Dunn, R. Fairlie, Campbell and Hislop, P. Chalmers, H. E. Clifford, John Keppie, C. R. Mackintosh, J. B. Wilson, Cullen and Brown, John Kinross, and W. Kelly. A very large majority of the 400 drawings and photographs included in the "Modern Architecture" section, and contributed by the above-mentioned architects, are already well known to readers of this Journal. Thus, to select a few of the buildings illustrated, Mr. H. Percy Adams sends drawings of the British Medical Association's building in the Strand and the Bristol Library. Mr. Frank Atkinson exhibits photographs of Selfridge's and the Midland Adelphi Hotel, Liverpool. Mr. Blomfield sends, amongst other examples of his work, drawings of his water tower and Library at Lincoln, and photographs showing the United University Club and Goldsmiths' College, as rebuilt by him. Dr. Burnet is represented by two drawings of the British Museum, and Mr. Basil Champneys sends photographs of the interior of Manchester Cathedral and an external view of the John Rylands Library. Mr. Collcutt exhibits a drawing of the well-known central tower of the Imperial Institute, London, and Sir Thomas Graham Jackson three equally well-known examples of his collegiate work at Oxford. Mr. Ralph Knott is represented by a drawing of the river front of the new London County Hall, and Messrs. Lanchester and Rickards by drawings and photographs of the Wesleyan Hall, Westminster, and town-halls at Deptford and Cardiff. Mr. Lutyens exhibits twelve drawings and photographs illustrating the south façade of "Papillon Hall," the front of "Homewood," Knebworth, two views of "Marsh Court," Stockbridge, and various details of "Heathcote," Ilkley, in addition to two drawings of the Picture Gallery at Johannesburg. Mr. Ernest Newton sends some good examples of his domestic work in various parts of England, and some photographs of the staircase at "Steep Hill," Jersey. Professor Beresford Pite contributes drawings of the exterior and interior of Uganda Cathedral, and Mr. William Pite numerous photographs of King's College Hospital and All Saints' Church, Ealing.

Mr. G. Gilbert Scott's Liverpool Cathedral, shown in a fine drawing by Mr. Gascoyne, and Messrs. Smith and Brewer's National Museum of Wales, are probably the best examples of modern architecture to be found in the exhibition. Examples of the work of Mr. Leonard Stokes include the Chelsea Town Hall, Lincoln Grammar School, Colney Chapel, St. Albans, a church at Sefton Park, Liverpool, and offices at London and Birmingham for the National Telephone Company; and Sir Aston Webb sends drawings of the new façade of Buckingham Palace and the Admiralty Archway, together with photographs of the Victoria and Albert Museum.

Whatever may be the individual merits of the above well-known works, or of others included in the exhibition, but not especially mentioned in this rapid review, there is little doubt that collectively they do not offer to the English architect either a very attractive or a very convincing display. But, on the other hand, it must not be forgotten that to the English visitor nearly all the exhibits appear in the light of illustration with which he is perfectly familiar either through the medium of the professional journals or the R.A. exhibitions, and on this account they have perhaps lost the charm of novelty, and thus their attractiveness has diminshed. A. W. S. CROSS.

The foregoing articles conclude our notice of the Anglo-French Exhibition of Architecture, which was held in Paris during the latter part of last month. Mr. Cross's former article appeared in our issue for May 27, and was mainly devoted to an account of the opening ceremony and to a description of the Palace of Versailles, which was visited by a numerous company of French and English architects under the guidance of M. P. de Nolhac. The exhibition closed on May 23.

A PRACTICAL CHART OF TOWN PLANNING PROCEDURE FOR SCHE
PREPARED BY OWNERS AND ADOPTED BY LOCAL AUTHORITIE

By R. IVESON DENHAM, Assistant Solicitor to the Corporation of Huddersfield, and L. ST. G. WILKINSON, M.Sc., A.M.I.C
an Assistant Engineer to the Corporation of Huddersfield.

THE first stage of the Chart for Schemes prepared by Owners and adopted by Local Authorities appears in this issue, and the other seven stages will follow in due course.

The Chart is intended to simplify the comprehension of the procedure which is necessary in promoting such schemes, and as the various means by which this simplification is brought about is discussed at some length in a previous article, which appeared in this journal on April 15th last, it is felt that no useful purpose will be served by repeating them here. For the benefit, however, of such readers as are not conversant with the subject, it may be recalled that there are two distinct classes of town planning schemes. The first of these is a scheme which is promoted entirely by a local authority, and the second is a scheme which is prepared by an owner or owners and adopted by a local authority; these two varieties of schemes are known as local authorities' schemes and owners' schemes respectively. Our readers are reminded that the procedure regulations of 1910 are now only applicable to owners' schemes, as a fresh set of regulations has been recently issued for schemes of local authorities.

Previous to the Town Planning Act of 1909 the organised planning of towns by local authorities was, as far as this country is concerned, almost negligible, the laying out of areas being practically left to the whims and fancies of the individual owner, who often quite naturally developed his estate without any regard to the amenities of his neighbour. On the other hand, there are many cases where a public-spirited and far-seeing landowner has laid out his estate on excellent lines, and it will usually be found that these cases of satisfactory development occur in connection with the larger estates. The explanation of this is that it is possible on a large estate to provide for the different classes of the community without injuring the other portions of the estate. The reader will thus realise the advantage to small owners, before developing their estates, of considering the advisability of promoting a town planning scheme in order to secure for themselves this continuity of purpose which is possible to the larger estates.

Owners' schemes under the Act may be classified as follows: Firstly, a scheme promoted by a single owner who possesses all the land included in the scheme; secondly, a scheme promoted by several owners acting in conjunction; and thirdly, a scheme promoted by a single owner who for the protection of his own estate deems it advisable to include neighbouring lands. The procedure during the passage of all these classes of schemes through the various stages of their promotion is identical. It is interesting to note under section 61 of the Act of 1909 that if a local authority fail to adopt a scheme proposed by owners, the Local Government Board may at the request of the owners, after holding a public local inquiry, either order the local authority to adopt the scheme or approve the scheme themselves. The scheme then has the same effect as if it had been adopted and approved in the ordinary way and, moreover, the Board have power to enforce the above order by mandamus.

Dealing now with the details of the procedure, it is to be noted that Article XXXIV. provides for departure from the regulations with the consent of the Local Government Board, and as in all probability schemes promoted by owners would be more or less complete before being presented to the local au
for their adoption, it would seem advisable to ap
the Local Government Board in order to o
modification of some of the later stages of the
dure. The Comptroller of the Board's Town Pl
Department, at an interview with the N
Advisory Town Planning Committee on May
stated that it might be possible for the Board t
this course. Since this interview the Board have
themselves willing to modify the regulations wh
reasonable cause has been shown where this c
done without conflicting with the provisions of t
of 1909, and having regard to the Board's atti
this matter, it would be advisable, where any
arises as to whether certain work is necess
arrange an interview with the officials of the B

At this point it might be useful to consider s
the more important instances where the Board's
could be sought with advantage, in order to as
whether they are prepared under Article XXX
dispense with some of the regulations owing
special circumstances of the cases set out below

The Board stated at the above-mentioned int
with the National Advisory Town Planning Com
that they would be willing to consider an applica
dispense with the service of notices on occupiers
interests were of a temporary character. Having
to the fact that all occupiers have been omitted
new regulations for local authorities' scheme
the list of persons to be served with notices, it
seem more than probable that a similar dispe
would be granted by the Board in the case of
schemes.

Again, under the new regulations for local a
ties' schemes, the initial public meeting sho
stage 1, column 4a, of the Chart is optional, a
stating that the local authority is willing to a
conferences with the owners being sufficient.
Board would not doubt consent to a like option
case of an owner's scheme.

Similarly the Board would probably allow a
paper advertisement to be substituted for the
to be served on all owners, etc., to the effe
authority to adopt a scheme has been received a
the local authority are about to adopt such s
The substitution of an advertisement for this n
provided for in the new regulations for local a
ties' schemes.

Article XXIV. makes provision for the servi
copy of the Board's draft order modifying the
on all owners, etc. This draft order need not be
on owners, but need only be deposited under t
regulations for local authorities' schemes, and the
would probably be willing to consent to the ad
of a similar course of action in the case of
schemes, more especially as the Board have s
due regard for economy in the promotion of sc

In connection with the various maps require
prepared, attention may here be drawn to the fa
under Article XVIII., Map No. 4, prepared in
ance with Articles XIV. or XV., may also be u
Map No. 5 prepared in accordance with Article
if these two maps are identical, in which case, h
the map used shall be marked both as Map No
Map No. 5. This point is emphasised in the
Government Board's circular letter accompanyi
regulations, which letter also states that no ob
would be made by the Board to a similar course
followed with regard to Maps Nos. 1 and 2

ar conditions to the above. Sundry particulars in d to the preparation of all maps will be found in le XXXII., and this article also makes provisions e supply of copies and extracts to interested per- on payment of a reasonable fee, and also for the ction of any plan referred to in Article XXVII. st it will be seen from the Chart that Map No. 2 t to be deposited for public inspection, yet it l seem from Article XXXII. that copies of it can tained on payment by any persons interested.

s provided by Article XXXVIII. that where any included in a scheme is within the distance pre- d by the Local Government Board, under section the Act, of any royal palace or park, notices must nt to the Commissioners of Works. This distance een fixed by the Local Government Board by an dated September 2, 1910, to be two miles in the of Windsor Castle Great Park or Home Park, and a mile in the case of any other royal palace or

cording to Article XXXIII. the local authority furnish any additional particulars or plans which ocal Government Board may require at any stage e promotion of a scheme. It is, however, quite ssible to insert this information in the Chart, as Board's requirements will vary with the circum- es peculiar to any scheme.

e resolutions given in column 2, with the tion of those specifically denoted statutory reso- ns, suggest themselves as being necessary to meet xigencies of the subsequent procedure, but are be taken as stereotyped. No mention has been of the resolutions which the local authority might expedient in controlling its deliberations in nittee.

hilst, as stated at the outset, an endeavour has made not to repeat unnecessary portions of the ous article, yet it is felt that this article would not been complete unless attention had been drawn tain provisions in the regulations which could not, convenience, be inserted in the Chart.

conclusion, it may be stated that every care has exercised in the preparation of the Chart, which elieved is free from mistakes, but the authors will ad to hear of any error which may be discovered.

CORRESPONDENCE.

litors disclaim all responsibility for the statements made or opinions d by correspondents, who are asked to be brief, and to write on one side only of the paper.

del Answers to R.I.B.A. Examination Papers.

e Editors of The Architects' and Builders' Journal.

RS,—I share with many of your readers the ure and instruction given by your model answers amination questions, but I must confess to some pointment when I read those in your current . [June 3.]

der Question 1 the plan shows the lavatories only borrowed lights, and without any ventilation pt the doors.

to the answer: 1. A main drain 4-in. in diameter d be quite sufficient. 2. The anti-syphonage pipes w.cs. being part of the soil pipes should be out- not inside, the building. 3. Drain chambers lined glazed bricks are rarely watertight. 4. The lava- wastes are "taken round the sun to meet the n" with consequent waste of plumbing and slight The anti-syphonage pipe might just as well go ght through the roof. A much better arrange- would be to have the waste pipe on wall of right- area, with drain from it direct to chamber; also ve a trapped glazed trough under each range of ns—a much simpler and cheaper arrangement.

Q. 2. It is by no means always the case that "if more than one w.c. be connected to any soil pipe" the traps should have anti-syphonage pipes; nor is the fresh-air inlet necessarily at "the lower end of the system." The fresh-air inlet should not commence "immediately above the intercepting trap," but from the highest part of the chamber.

Q. 4. The w.c. is shown without a ventilated lobby; the bath and lavatory have both antiquated and uncleanable overflows and contrary to Water Board regulations; many smaller details call for attention, such as the 1-in. overflows and the $1\frac{1}{4}$-in. tap to lavatory basin.

Q. 5. The plan of the classroom showed what a classroom ought *not* to be.

Leonard E. Spencer, M.R.San.I.

Intwood, Norman Road, Cheam.

[The above letter has been sent to our contributor, who makes the following reply:

"Mr. Leonard Spencer's criticism is interesting. Some of the points raised deal with the exceptional case, which can never be considered in an examination. The diagram in Question 1, being drawn from memory (the plan was supplied in the examination room), may differ slightly, though not materially, from the original. Criticism therefore is hardly relevant.

"A 4-in. main drain might serve; a 6-in. is safe under all conditions. No adjoining owner is likely to consent to a neighbour's drains discharging over his premises. The arrangement of the wastes under each range of basins is a matter of opinion. The pipe through the flat is a good arrangement, but the solution I proposed dispensed with the hole in the flat roof, with resultant possibility of leakage.

"In Question 2, the reference 'immediately above' applies to the manhole, and is explained by the sectional diagram.

"Question 4. All possible ventilation is good; and, if the site permits, no doubt a window in the lobby is desirable. How many cases, however, permit of this addition? As to fittings, experts differ. Where there are so many varieties of apparatus there is no general agreement as to which is best. Theoretically, a $1\frac{1}{4}$-in. overflow is required. A 1-in. overflow will discharge all the water admitted by a $1\frac{1}{4}$-in. (nominal) tap.

"The diagram for Question 5 serves only the purpose of showing the position and size of windows and the wall surfaces—nothing more is required."]

Proposed Charter, R.I.B.A.

To the Editors of The Architects' and Builders' Journal.

Sirs,—The letters in your last issue are really illuminating. The great grievance of the Licentiates seems to be that they are not allowed to ride a coach and horses through their given pledge that they will use no other affix than "Licentiate R.I.B.A."

It is most evident that a general and public reminder such as that printed in the Journal, R.I.B.A., was necessary, and, indeed, overdue. One is met on every hand by the fancy titles L.R.I.B.A., Lic. R.I.B.A., Lict. R.I.B.A.—*vide* your own "Wanted" columns week by week.

To my mind it is not so much the reminder itself that is humiliating to Licentiates as the necessity of such a reminder.

Your correspondents will do well to dissociate themselves as quickly as possible from the Licentiate class if they value their dignity, and become full corporate members of the Royal Institute by submitting themselves to the examinations. Having done so, they will be glad to feel that there are limits to the purchasing power of £2 2s. per annum.

Cecil H. Perkins.

Church Road, Bracknell, Berks.

ENQUIRIES ANSWERED.

Openings in Warehouse Walls.

H. writes: "Are the openings in the external walls of warehouse buildings governed by section 54 of the 1894 London Building Act, or is a greater extent of recesses and openings allowed in this class of building? I have seen some ordinary warehouse buildings, the openings in the walls of which apparently far exceed half the area of the whole wall."

—The thickness of the walls for warehouse buildings is provided for in Part II. of the First Schedule. There does not appear to be any regulation as to openings in external walls on the ground storey, and in the case of a shop the whole superstructure may be supported on girders and stanchions. According to Sec. 54 (3) the superintending architect of the London County Council may give consent to any modification with respect to the area of recesses and openings in any special cases where he may think proper. A.

Floor Construction.

J. F. W. (Yorks) writes: "A city corporation decline to approve of plans in which it is proposed to construct floors of domestic buildings of other materials than wooden joists (such as reinforced concrete) unless a written undertaking is given to test floors upon the completion of the building with an evenly distributed load of 3 cwt. per sq. ft. I shall be interested to know whether such a demand has been made by any other authority, and under what Act such regulations can be made."

—I very much question whether the Corporation have any power to enforce such a demand as that mentioned in the question. I suggest the desirability of obtaining legal advice upon the bye-laws now in force. There is, unfortunately, a tendency nowadays for all officials to overestimate their legal powers, and I strongly suspect that has been done here. The London County Council has proposed special regulations with regard to this comparatively new method of construction, but I do not know of any other authority which has considered the matter. An interesting paper and discussion upon this subject appears in the "Surveyors' Institution Transactions," Vol. 45, part 9, April 7, 1913. F. S. I.

Appeal under the London Building Acts.

JASON (Lee, S.E.) writes: "I understand that new regulations as to the procedure in appeals under the London Building Acts have been recently issued. Where can these be obtained?"

—A summary of the more important new regulations was given in the Journal of May 20, p. 364, where it was stated that the new regulations may be had, price one shilling, at the office of the Tribunal of Appeal, 13, Great George Street, Westminster. Briefly stated, the new provisions place witnesses under appeals in the same position as those under actions at law, while the Tribunal may now state a case for the High Court, costs may be taxed, and the fees for hearing have been revised. P. G. H.

Architects, Builders, and Auditors.

OLDHAM (Cheshire) writes: "(1) In a public limited company is it usual for the company's auditor to accept the architect's measurement account as final, or does the auditor require to see the builder's account? (2) Is it right that the company's auditor should demand to see and have a copy of the accepted prices and a set of priced quantities?"

—(1) An auditor usually requires to see the builder's account (after it has been settled by the architect), and the builder's receipts for the money paid to him. (2) I certainly think the auditor should be allowed to see the original contract, priced quantities, and everything needful for him to satisfy himself that the sums paid to the builder are correct; *inter alia*, he thus takes a considerable amount of responsibility off the architect's shoulders. F. S. I.

Property in Plans.

X. Y. Z. (Hants) writes: "A late client of mine reminds me of the decision of the Appeal Court that plans, etc., of works pass to the owner on payment of architect's remuneration. On the strength of this decision, although all my commissions have been paid me, he is asking that all plans for various jobs during the last five or six years should be handed to him. Am I obliged to comply? And, if so, I conclude there is nothing to prevent my keeping copies?"

—The case governing this matter is "Gibbon *v.* Pease" (L.R. (1905) K.B.D., 810, it being held "that a custom set up by the defendant entitling him, as architect, to the property in the plans after the completion of the work was unreasonable and acorded no answer to the action." This decision was upheld upon appeal (March 24, 1905) and no doubt correctly represents the present state of the law. I advise you to hand over to your client all the drawings asked for. No doubt you have the drafts of them to refer to in case of need. There is, however, nothing whatever to prevent your making copies as you suggest. F. S. I.

Tank Walls.

E. L. T. (Longwood) writes: "I enclose a tracing of tanks to be used for the storage of soft water, and shall be glad to know if the walls shown are strong enough to hold the water, or if any saving of material could be effected by reducing sizes in any way."

—Fig. 1. shows the section of proposed outer walls with the diagrams of thrust drawn out for the weakest place, A.B. For full description of method of working see "The Mechanics of Building Construction" (Longmans, 6s. net). The vertical component of the final resu
the diagram is 1,113 lb. acting at
beyond the centre of gravity of the
Then the stresses will be

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{1113}{1\cdot5} \pm \frac{1113 \times 1\cdot8}{\frac{1}{6} \times 1 \times 1\cdot}$$

$$742 \pm 549\cdot1 \text{ or } \frac{742 + 549\cdot1}{2240} = 2\cdot$$

per sq. ft. compression and $\frac{742 -}{2}$

=2.12 tons per sq. ft. tension. Thi
yond the usual allowance, as it
ferred that there should be no tensi
if the walls are carefully built in
mortar they may be relied upon w
thickness given. The division w
however, much too light. Try the
shown in Fig. 2. The vertical com
of the resultant is 2,016 lb. act
3.7 ft. beyond the centre of gravity
section. Then the stresses will b

$$\frac{W}{A} \pm \frac{M}{Z} = \frac{2016}{2\cdot625} \pm \frac{2016 \times 3\cdot7}{\frac{1}{6} \times 1 \times 2\cdot62}$$

$$768 \pm 6486, \text{ or } \frac{768 + 6486}{2240} = 3\cdot2$$

per sq. ft. compression, and $\frac{768}{2}$

= 2.55 tons per sq. ft. tension at t
CD. This is the least that will be
F

OTHER PEOPLE'S OPINI

Twentieth Century Art.

The century is young, and we
near to its art to judge what it
worth in the scheme of things.
whether we like it or not, we are co
to see that the characteristic art
twentieth century is essentially d
from the characteristic art of th
teenth. It is not a question of the
ences between one painter and a
The whole conception of art is di
Until the closing years of the nin
century painters, good, bad, and i
ent, were trying their hardest to
things real to the eye. The typical p
good, bad, and indifferent, of the tw
century are trying their hardest to
things real to the mind and leaving

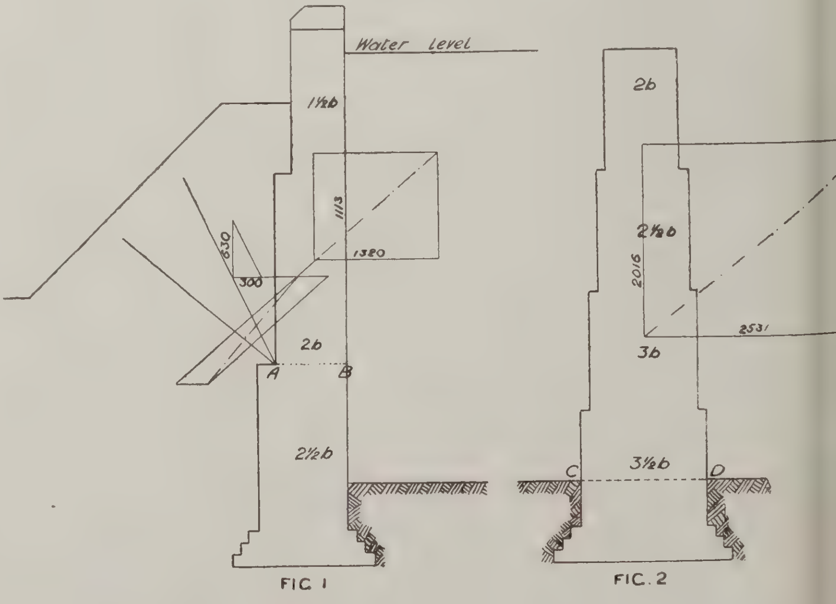


FIG 1 FIG. 2

DIAGRAM ILLUSTRATING ANSWER TO E. L. T. (TANK WALLS).

ake its chance of being satisfied. That he great difference, and beside it the erences between the various "isms" ome unimportant. They are affairs of studio, but the other is the affair of the spirit.—"C. M.," in the "Evening ndard and St. James's Gazette."

A Criticism of Gothic.

'he most penetrating criticism of Gothic itecture that has been made is that of sper Mérimée, who pointed out that a at cathedral like that of Amiens is a hly strung organism with its most vital ts, the flying buttresses and window lions, exposed to the weather. Such a hedral is more like an engine than a ument, in that it is only kept in order unceasing attention.—Professor haby in "Mediæval Art."

The Craving for Colour.

n the architect's office, a great deal of e is expended upon studying the dows on the elevation. A need is felt some interest. The cornice and proions and modelling are carefully worked r (on paper), with a view to the effect light and shade. If the world were ur-blind, this would suffice, perhaps; the reason for all this study is really unconscious feeling of a lack of colourrests in the elevation. At least, this is explanation of an architect whose ion is of weight. To Greece we return much of what is beautiful in form, but take the form as it is to-day, not as t in the days of its living grandeur ed out in vibrant colour. Even when architect has determined upon the adbility of employing colour in his eleva-, the results of the finished work are n neutral or, due to the height and the ence of atmosphere, merge into the of the shadows of the smoky elevation do not count.—Mr. J. H. Buller Allan 'A Plea for Colour in Architecture," in "Journal of the American Institute of itects."

NEWS ITEMS.

Change of Address.

r. H. S. Goodhart-Rendel has removed n 5, New Court, Lincoln's Inn, W.C., ew offices at 60, Tufton Street, Westster (opposite Dean Trench Street), to ch address all communications should uture be sent.

The London County Hall.

n the London County Council Mr. J. Gilbert has given notice of a motion to effect that in view of the time that elapsed since the council determined the erection of the new County Hall, of the slow rate of expenditure on the ding, a special committee be appointed nquire fully into all the circumstances, owered to take evidence, and incted to report fully before the summer ss.

rnational Garden Cities and Town-Planning Association Congress.

he International Garden Cities and n-Planning Association will hold its congress and tour in England during . Visits will be paid to the Garden schemes around London and houses ted by municipal authorities, societies, ate individuals and companies will be ected. The congress will be attended delegates from America, Austria, ada, France, Germany, Italy, Poland sia and Spain.

Pillars Supporting Shelters.

The Westminster City Council is recommended by its Works Committee to require the removal, within six months, of the pillars supporting the iron and glass shelter at the entrance to the Lyric Theatre in Shaftesbury Avenue, the shelter to be supported by other satisfactory means. In nine similar cases the Council has already required that the pillars supporting the shelters shall be removed from the public way.

Lord Salisbury and Town Planning.

At the quarterly meeting of the Garden Cities and Town Planning Association held a fortnight ago, Mr. Cecil Harmsworth, M.P., presiding, it was reported that owing to the pressure of his judicial duties, Mr. Justice Neville had resigned the position of president. Lord Salisbury was elected as his successor, and Sir Ralph Neville was elected vice-president. Lord Salisbury opened the Town Planning Exhibition at the Imperial Institute on Monday week last.

The "Dominion Site."

It is reported by the Improvements Committee of the London County Council that the Dominion Site, Ltd., desires that the option held by it, in consideration of the payment of £3,000 a year, of taking up a lease for ninety-nine years at a rent of £50,000 a year of the central portion of the crescent site between Aldwych and the Strand, or of purchasing the freehold for £1,300,000 shall be continued. The committee is informed that very considerable progress has been made with the scheme.

A Mercantile Year Book.

In the twenty-eighth annual issue of "The Mercantile Year Book and Directory of Exporters," which has just been published, every section has been revised and brought up to date and considerably more than 1,000 new names have been added to the list of oversea buyers in Part 2, which now extends to 243 pages, and provides the names of importers in upwards of 1,100 business centres throughout the world. The book, which is edited by Walter Lindley-Jones, F.R.G.S., is published, price 10s., at 16, St. Helen's Place, Bishopsgate, E.C.

Garden Ornaments.

An album showing a collection of garden ornaments, lead and stone figures, vases, old wrought-iron gates, garden temples, etc., exhibited at the Royal Horticultural Society's spring show at Chelsea Hospital Gardens, by Messrs. Thomas Crowther and Sons, 282, North End Road, S.W., includes two delightful lead figures by John Cheere, who died in 1787. Even more interesting is a carved stone wellhead from an old garden in Venice, and one of the remaining dozen or so of plates is filled with some most charming vases in lead or stone, all of beautiful shape, and all showing exquisitely modelled figures or other ornamentation.

HYDE CORPORATION SWIMMING BATHS: A CORRECTION.

With reference to the advertisement of Richard Johnson, Clapham, and Morris, Ltd., for their "Lattice and Keedon" system of reinforced concrete, which appeared in our issue of May 20, we are asked to state that the reinforced concrete work of the Hyde Corporation baths was carried out by the Fram Reinforced Concrete Company, Ltd., of 23, King Street, Manchester, who used Johnson's "Lattice" in the work.

SPECIAL LEGAL REPORTS.

Important Building Appeal.

London County Council v. Allen and Others.

May 28. Court of Appeal. Before Lords Justices Buckley and Kennedy, and Mr. Justice Scrutton.

Reserved judgment was delivered in these appeals, which were by the defendants, M. J. Allen and E. Allen, from a judgment of Mr. Justice Avory.

Lord Justice Buckley said the actions were brought by the Council under an indenture of January 24, 1907, made between M. J. Allen, a builder, and the Council, who claimed certain mandatory injunctions and damages for breach of a covenant in the indenture. Before the date of the execution of the indenture, M. J. Allen had applied to the Council for permission, under Section 7 of the London Building Act, 1894, to his laying out a new road called the Galloway Road, and a small portion of the road at the northern end of Galloway Road, in continuation of Dunraven Street at Shepherd's Bush. The Council gave permission on certain terms which were embodied in the covenant of January, 1907. The covenant stipulated that Allen undertook for himself, his heirs and assigns, and all other persons claiming under him, so far as was practicable, that he and they would not erect, or place, or cause to be erected, any building or structure or any other erection without the consent of the Council, and that in every covenant, sale, charge or mortgage, or lease of the land, he would give notice of the covenant. The indenture recited what was contrary to the fact, viz., that M. J. Allen was the owner in fee simple. He was not. At that time he had merely an option to purchase what was known as plot 1, which was a continuation of Dunraven Street to the west of Galloway Road, and the continuation of Galloway Road to the north of Dunraven Street. As regarded plot 1, on July 3, 1908, it was conveyed to M. J. Allen in fee simple, and the same day he mortgaged it to one Willcox for £3,600. On August 1, 1911, the mortgage was redeemed and Willcox conveyed the land to the defendant, Emily Allen, and on October 19, 1911, she changed the land, together with three messuages then recently erected to one Norris. It was in July, 1911, Mrs. Allen built the three houses on plot 1. The writ was issued by the Council on August 5, 1911, by virtue of sections 7 and 9 of the London Building Act, 1894. The Council had certain powers and control over the land as to how it should be laid out in streets, but they had no estate or interest in the land adjoining, or affected by the covenant. Under these circumstances, Mrs. Allen and Norris, who were no covenanting parties, contended as a matter of law, assuming there had been a breach of the covenant of July, 1907, and of which they had not had notice, that the plaintiffs could not maintain any action against them. The respondents did not contend that the covenant ran with the land, or that the position of landlord and tenant did not exist. To the general abstract question that a person purchasing land with such a covenant attached was bound by it, the answer must be in the negative. It was not true as a general proposition that a purchaser of property, having notice of the existence of such a restrictive covenant affecting the property, was bound by such a covenant. Under these circumstances, it was not necessary to determine whether the notice of the covenant was or was not given. If the case went further that point could be settled by the House of Lords. The erection of the house was undoubtedly a breach of the covenant, but the learned judge in the Court below had refused the injunction asked for by the Council, and had given nominal damages for a technical breach. Therefore there only remained the question of costs. As regarded plot 2 the only defendant was M. J. Allen, who contended that the wall he erected was not a building, an erection, or a structure. The object of the covenant was to secure that plot 2 should remain unobstructed and be available for the extension of Galloway Road. The wall erected by M. J. Allen created such an obstruction, and the erection of the wall was a breach of the covenant. The defendant, M. J. Allen, said there was a sharp drop to the surface of the soil, and that the fence was necessary for the protection of the public, and that it was only a temporary fence. Had the defendant pleaded that at the trial and said he would have removed it if requested, there would have been no difficulty. Instead of doing that he submitted it was not a structure, and the judge in the Court below had rightly made an order for the fence to be removed. As to plot 2, M. J. Allen must pay the costs, and as the Council failed in respect of plot 1 they must pay the costs in respect of that. There might have been a different way of dealing with the costs, but the Court would interfere as to the defendants dividing the costs. The order would be that the action against Emily Allen and Norris would be dismissed with costs, and the appeal by M. J. Allen would be dismissed with costs.

The other judges concurred.

PROJECTED NEW WORKS.

Hospital for Jews, London.

The Jewish Community of London propose to erect a hospital for the benefit of their sick poor in the Metropolis. A site has been purchased, and a hospital to cost £10,000 is to be erected.

Artisans' Dwellings, Child's Hill.

The Hendon D.C. have received a letter from the L.G.B. sanctioning a loan for the erection of artisans' dwellings at Child's Hill. It is proposed as an experiment to erect fifty cottages at a suggested rental of 8s. 6d. per week.

School Extensions, Bridlington.

The Governors of Bridlington Grammar School have had prepared by Mr. John Bilson alternative schemes for the provision of additional teaching and living rooms and other accommodation. The costs are respectively estimated at £4,306 and £5,930.

Pavilion Scheme, Bournemouth.

A Local Government Board enquiry has been held at Bournemouth into the application of the Council for sanction to borrowing a sum of £60,000, for purposes of an amended scheme for the provision of a pavilion, etc., on the site of the Belle Vue and Pier Hotel and on land forming part of the Central Pleasure Grounds.

Aviation Works, Yorkshire.

Messrs. Armstrong, Whitworth and Co., have purchased about 1,000 acres of land in the parish of Barlow, near Selby, for the erection of extensive works for the production of aviation appliances. A new road has been completed into the centre of the site from the village of Barlow, and it is expected that contracts for the erection of the works will be given out shortly.

Hospitals, Bedwellty.

The Monmouthshire Health and Housing Committee have agreed to the principle of grouping the seven urban districts in the west of the county for the provision of isolation hospitals. It is proposed to erect one hospital at or near Pontllanfraith, and another on or near Bedwellty Common.

Mannesmann Company Works, Newport.

The purchase of land for the erection of works in Newport by the Mannesmann Tube Company has now been finally completed. The work of building and the fitting up with machinery will now proceed rapidly. It is stated that the value of the machinery to be placed in the works will amount to something like £350,000.

Asylum Buildings, Aberdeen.

Aberdeen Lunacy Board have under consideration a proposal to erect additional accommodation at Kingseat Asylum. The number of patients for whom accommodation has to be provided is approximately 80 to 100. The Board's architect, Mr. A. H. L. Mackinnon, recommends the provision of a combined hospital villa for both sexes at a cost of £12,250.

Infirmary Extension, Ashton-under-Lyne.

Extensions are proposed at the Ashton District Infirmary to provide accommodation for an additional fifty or sixty beds, a new wing with an additional operating theatre, a Röntgen-ray department, and an eye department. A site will be selected adjoining the Kershaw Hospital. The scheme will involve an expenditure of about £25,000.

Bridges, Windsor.

The Albert Bridge and the Victoria Bridge, both crossing the River Thames below Windsor, one on the south side of the Home Park and the other on the north, are now proving incapable of bearing the strain of modern motor traffic. The former is already condemned, and a new bridge is to be built at a cost of about £8,000, the Berks and Bucks County Councils sharing the expense.

Buildings, Dunfermline.

Work is to be proceeded with immediately in connection with the demolition of a property in High Street, Dunfermline, and the erection on its site of a branch of the Union Bank. The new building, which will be four storeys in height, is to be erected from plans by Messrs. Burnett and Boston, architects, Hope Street, Glasgow. It is expected to cost about £6,000. New offices for the Prudential Assurance Company, to cost at least £10,000, are to be erected in East Port Street, from the designs of Mr. Paul Waterhouse.

Works, Swindon.

The following plans have been approved by Swindon Town Council: Mr. E. C. Skurray, addition to flour mill, Lowestoft Street; Mr. R. J. Beswick (for East Street Co-operative Society), alterations, 6, Fleet Street; Mr. J. George, extension of brick shed to form motor house, 169, Victoria Road; Messrs. Bishop and Fisher (for Messrs. Mills and Merricks), shop front, Regent Street; Mr. R. J. Beswick, enlargement of printing works, 51, Bridge Street; Mr. R. J. Beswick (for Mr. S. B. Cole), alterations, 92, Regent Street; Mr. J. S. Guggenheim, studio, 6, Cambria Place; Mr. T. W. Bradley, builder's shed, 225, Ferndale Road.

Buildings in Clydebank.

Plans have been passed by Clydel
Dean of Guild Court for the erection
extension of buildings, to cost, app
mately, £26,000. Messrs. William B
more and Co., Ltd., were granted li
to erect a condenser tube-house at
naval construction works, Dalmuir,
built on steel columns, and to have a
roof. The cost is to be about £1
Messrs. Dawson and Downie, engin
North Elgin Street, were granted per
sion to extend their works at a co
between £700 and £800. An applic
was heard on behalf of Messrs. John B
and Co., Ltd., shipbuilders, for linin
erect a row of fifteen tenements at W
crook, which is in close proximity to
yard. The tenements are to be of
storeys and of six houses each, maki
total of ninety houses. All the house
to be of one room and kitchen, with
room. The contractor is Mr. Leslie
Clydebank, and the work is estimate
cost about £20,000. Lining was
granted to the Clydebank Picture H
Ltd., to erect a new picture house in
gow Road. It is to accommodate
and is to cost about £4,000.

Building Works, Bolton.

Bolton Council have approved plan
follows: W. Kearns, amended plan of
ture theatre in Belmont Road; J
Hamilton, pair semi-detached villa
Westcliffe Road; T. H. Hesketh and S
extension to boiler-house in Black
Road; Ainsworth Brothers and Co.,
additional storey to mill in Weston St
Mr. Bennett, motor shed in Chorley
Road; W. Gornall, two houses in Gr
mount Lane; G. Duxbury, seven ho
and shops in Mornington Road; Her
son and Brown, alterations to school
Mount Street; T. Mitchell and Sons,
offices in Edgar Street; J. Marsden
Sons, alterations to engine-house at Al
Mills, Coe Street; Mr. Partington, w
house in River Street; R. Threlfall, ex
sion to works in Shifnall Street; J.
shaw and Co., additions to mill in D
Street; Johnson, Hodgkinson and P
son, additional storey to Parrot Street
T. E. Smith and Son, amended pla
picture palace in Mount Street;
Pickup, thirteen houses in Const
Road; J. Whittaker, motor house,
Chorley New Road; S. Gregory,
houses, Bentley Street; Messrs. W
head, garage in Crown Street;
Dickinson and Co. (Bolton), Ltd.,
Offices in Fairclough Street.

Buildings, Glasgow.

The principal linings granted last
at Glasgow Dean of Guild Court w
Walther M. Bergius, engineer, 10,
bank Gardens, Hillhead, addition to e
neering works at the corner of Canal St
and Dobbie's Loan. Howard and W
ham, Ltd., theatre proprietors, 5,
Andrew's Square, Edinburgh, alterat
to Royal Theatre hall at 75, Cowcad
Street. Andrew Meikle and Co., build
4, Bath Street, villa and offices on
north side of Southbrae Drive, Jordan
John M'Cammond, builder, 19, Alb
Terrace, Shettleston, buildings in Sa
hills Road, Shettleston. Mechan
Sons, Ltd., engineers, Scotstoun I
works, Scotstoun, workshops in S
Street and Balmoral Street, Scotst
William Beardmore and Co., Ltd., 36,
toria Street, Westminster, London,
Parkhead, Glasgow, buildings in
Edinburgh Road, Parkhead. Bull
Lade, and Co., Ltd., distillers, 4, Both
Street, buildings at the Loch Katrine
tillery, Yate Street. The North Bri

notive Company, Ltd., 110, Fleming- Street, Springburn, extensions to in Blenheim Street. The Corpora- of the City of Glasgow, tenements of ng-houses in Gallowgate and Moore ; also extension of Meat Market in ur Street, and alterations on Western Buildings. Anglo-American Oil any, Ltd., 118, Queen Street, build- or stables, oil tanks, and motor spirit at Canal Street, Port-Dundas.

London.

ject to compliance with certain ied conditions, consent has been given L.C.C. to the execution of the fol- g works:

mondsey.—Addition to Guy's Hos- on the western side of Great Maze Bermondsey, on the application of s. Woodd and Ainslie, on behalf of overnors of Guy's Hospital.

ton.—Addition to the Stockwell ry, Stockwell Green, on the applica- f Messrs. W. Bradford and Sons, on of C. Hammerton and Co., Ltd.

windows, porches, gables, with half-timber work and projecting w framing to twelve houses on the rn side of Heathdene Road, Streat- on the application of Messrs. E. and ates.

windows, porches, sham half-timber and projecting window framing to ouses, on the southern side of Hill- Road, Streatham, on the application ssrs. E. and A. Wates.

ldings on a site on the north-western f Herne Hill, Norwood, on the appli- of Messrs. R. Ellis and Son.

lsea.—Two-storey building and ex- hardwood staircase at the rear of nith Street, Chelsea, on the applica- f Messrs. Morris and Co.

ham.—Temporary motor house at nion Grove, Clapham, on the appli- of Messrs. Arrow and Sells.

sbury, East.—Formation of a party- pening at the third floor level be- 94 and 95, Milton Street, Finsbury, application of Mr. W. Hammond, alf of Dr. Jaeger's Sanitary Woollen Co., Ltd.

mersmith. — Re-erection of 148, Street, Hammersmith, on the appli- of Mr. H. Mair, on behalf of the ersmith Metropolitan Borough il.

ition at 452, Uxbridge Road, Ham- ith, on the application of Messrs. nders and Son, on behalf of Mr. M. er.

pstead. — Re-erection of Lower Branch Hill, Hampstead, on the tion of Mr. W. Priddle, jun., on of Mr. W. Smith.

sington, North.—Additions and a at St. Mark's Institute, St. Mark's Notting Hill, on the application of H. Sothcott, on behalf of the vicar urchwardens of St. Mark's Church.

sington, South.—Additional cubical at the premises of J. Barker and td., Kensington High Street, on the ition of J. Barker and Co., Ltd.

beth, North.—Building at Burnley Sidney Road, Stockwell, on the ition of Mr. T. S. Myland, on behalf J. Pearson.

isham.—Houses on the southern Stanstead Road, Lewisham, on the tion of Messrs. Norfolk and Prior, alf of Mr. J. Hughes.

n houses, Cliff View Road, Lewis- n the application of Mr. A. Marsh.

THE BUILDING TRADE CRISIS.

In order to make more clear the record of the dispute, as outlined in last week's issue, it should be mentioned that the National Federation Council's resolution of May 11, requesting the London Master Builders' Association to accede to the request for a joint conference [duly held, May 15 and 18], and suggesting a general lock-out in the event of the operatives refusing to accept terms that are within the recommendations of the Augmented National Board of Conciliation, bears reference not to the resolution of March 17, but to the recommendations agreed to on April 17, of which the tenour is shown in the following extracts:

Augmented National Board of Conciliation's Recommendations for Settlement, April 17, 1914.

"For the adjustment of all disputes and to avoid stoppage of work (including any dispute in regard to a workman or workmen belonging or not belonging to a trade society, it being understood that no distinction is to be drawn on either side between one or other, provided always that any operative objected to is not a defaulter to his society, or that it can otherwise be shown to the employer that he has made himself specially objectionable, then in such case should a dispute arise and the parties fail to arrive at an agreement thereon the matter shall be referred to the Board of Conciliation as provided hereafter, pending which no strike or lock-out shall take place), it is agreed that upon a difference arising between an employer or upon the works of an employer or any of his [name of trade] from any cause whatever, notice shall be given by the association or society of the complaining party to the association or society representing the other side, and the subject matter of dispute shall thereupon be referred to the Board of Conciliation, which shall be summoned within three days, and shall give its decision within the next three working days. . . .

"That the general executives who are guaranteeing these rules shall circularise their members to the effect that any rules of the said union which are in conflict with this agreement must not be applied in London.

"That the London employers agree that they will re-instate at the earliest practicable moment those workmen who have been engaged in the present dispute, and it is agreed that there shall not be any victimisation on either side by reason of any acts performed in connection therewith.

"That where an employer objects to a ticket inspection on any job or in any shop, such inspection shall not so take place.

"That Rule 15 of the Plasterers' Rules be inserted in the rules for the other trades, viz., 'No "boycotting" or "black-listing" shall take place by the trade society on whose behalf these rules have been signed where firms adhere to these rules.'

"That the following be the form of guarantee to appear on each set of rules: 'It is hereby mutually agreed between the associations, which, by their duly accredited representatives, have signed the above working rule agreement, and the General Union of ——— that the said rules shall be rigidly enforced by all the parties hereto, and, if necessary, to the utmost extent of the disciplinary powers embodied in the constitutions of the respective said associations, and of the said General Union. The General Union further guarantees to the said Master Builders' Association the due observance in every respect of the said working rules by its London branches and the members thereof, and the London Master Builders' Association likewise guarantees to the said General Union the due observance in every respect of the said working rules by the members of the London Master Builders' Association.'

"That the signatories to the new agreements shall be the presidents and secretaries of the various associations and unions concerned.

"That the rules, as thus amended, remain in force until May 1, 1916.

"*Memorandum for Builders' Labourers' Rules only*:

"It is hereby expressly agreed between the parties to this agreement that no dispute affecting workmen who are members of the ——— Labourers' Union, but who are employed in other industries than the building trade, shall be allowed to affect in any way the due observance in every respect of this agreement.'

By their ballot, of which the result was announced on April 29, the unionists rejected these recommendations, and, as announced last week, they rejected, in their second ballot, the proposals of the joint conference of May 15 and 18.

London Master Builders' Association's Circular, June 3.

In a circular letter sent to the Press on June 3 by Mr. S. B. Depree, secretary of the London Master Builders' Association, a few salient points respecting the issues involved in the dispute are placed before the public. It will be noticed that these points closely coincide with those made in the special communication which we were able to include in last week's issue.

"There are," Mr. Depree writes, "certain principles governing all businesses, and one of the most elementary of such is the adherence to contracts entered into. This is the sole origin of the present trouble in the building trade. Only within the last eighteen months have new codes of working rules been agreed to and signed by the London Master Builders' Association and the trade unions concerned, in which an advance of wages averaging 10 per cent. all round was granted. Within a few weeks of these rules being signed jobs were struck all over London, without a moment's warning, in absolute defiance of one of the rules which stated that 'for the adjustment of all disputes and *to avoid stoppage of work*, it is agreed that upon a difference arising between an employer, or upon the works of an employer, and any of his workmen, from any cause whatever, the subject matter of the dispute should be referred to the Board of Conciliation.' The reasons given for this action were in nearly all cases that certain workmen did not belong to a trade union.

"The demands made by the trade unions now include the following:

"1. The wages of all classes of workmen (both skilled and unskilled) to be advanced a further penny per hour. (It should be noted that this further advance would increase the wages of the unskilled labourer during the past eighteen months from 7d. to 9d. per hour, equals 30 per cent. advance.)

"2. No overtime to be worked unless application is made to the trade union, and to be paid for at the rate of time and a half for the first two hours, double time after.

"3. Workmen employed outside the London district to receive 2s. 6d. per day extra, with 15s. per week as a maximum, with travelling money and time occupied in travelling in addition.

"4. Rules to be terminated at three months' notice, such notice not to terminate during the winter.

"5. Workmen employed at a height of 60 ft. to be paid one penny per hour extra.

"No conciliation for the settlement of disputes.

"My association has been informed by the trade union representatives that it must regard the suggested increase of wages as *moderate*, many of the men wishing to demand 1s. 3d. and 1s. 6d. per hour.

"The demands comprised in this new code of rules must be eminently instructive to those London builders who profess to be unable to discern any adequate reason for supporting the London Master Builders' Association.

"They may also be instructive to the public, who are already complaining of the greatly increased cost of building operations, which arises chiefly from the recent advances in wages and from other expenses for the benefit of the workmen, such as Health and Unemployment Insurance and the greatly increased rates for insurance under the Workmen's Compensation Act.

"In the present dispute my association is contending for the honest adherence to trade agreements. It will be observed that incidentally there are other very serious issues now involved.

"I may add that my association does not attach much importance to the recent ballots. We are informed that no workman was allowed to vote unless he attended at his lodge for that purpose and voted in the presence of the officials. It is not surprising that the bulk of the workmen would refuse to vote under such circumstances.

"I note that it is intimated in the Press that the leaders were in favour of a settlement, but this is difficult to believe in face of the recommendations accompanying the ballot paper, which not only confused the issue, but in some cases definitely invited the rejection of the peace proposals.

"In one case the following words actually appear: 'We desire to express the opinion that the offer of the London Master Builders' Association represents a distinct defeat so far as we are concerned. . . . We urge you to continue the fight.'

"In conclusion I would draw attention to one very vital question in dispute, and one to which no honourable employer could possibly consent. The men demand that all those who have remained at work during the dispute shall be discharged, as they are what are called 'blacklegs.' Comment upon such an outrageous demand is needless."

"Eliminating the Contractor" (?)

Evening papers of Tuesday in last week, and some of the morning papers of last Wednesday, had on their placards and in their article-headings some very sensational headings, such as "Dramatic Stroke in Building Dispute," "Eliminating the Contractor," "Builders' Union Attempts a £100,000 Task," and so forth. These attempts to extract sensationalism from a dull subject in a droughty season for news were based on an arrangement for supplying "direct labour" for the resumption of work on the new headquarters of the Theosophical Society in Tavistock Square. That this development does not alarm the employers was made evident to us by the observations of several eminent contractors whom we immediately consulted upon the subject. Most of these gentlemen insisted, in effect, that the "direct labour" system, as the misadventures of many municipalities have demonstrated, invariably sends up by leaps and bounds the cost of the job, and that it commonly results in lax supervision; while in cases of breach of contract, or in instances of defective work, the building owner deprives himself of the remedy he would have against the contractor. There are also obvious difficulties with respect to workmen's compensation for accident, as well as the liabilities under he Insurance Act. In short the building owner who employs direct labour assumes all the heavy burdens and legal obligations of the building contractor, while cutting himself off from the highly skilled services that the contractor alone is in a position to render.

Mr. Walter Lawrence, Jun.'s View.

A succinct statement on the matter was given to our representative by Mr. Walter Lawrence, Jun., the President of the London Master Builders' Association. Mr. Lawrence said:

"The fact of the Theosophical Society having entered into a so-called agreement with the London Building Industries Federation will have no effect whatever as far as the attitude of the London Master Builders' Association in the present dispute is concerned. The case in question is exceptional, inasmuch that no building contract existed such as is usual in the building trade, which provides for such a position as has arisen by containing a strike and lock-out clause.

"The suggestion that 'the days of the building contractors are numbered' is absurd, as what other building owner would elect to accept such conditions as are embodied in the agreement referred to?

"We are told that the trustees agree as follows:

(1) To employ trade unionists only on the building work, from foremen downwards.

(2) To do all masonry, plumbing, brickwork, and plastering by direct labour.

(3) That henceforth all materials used in the work shall be obtained from 'fair' firms, approved as such by the representatives of the L.B.I.F.

(4) That any sub-contracting necessary shall be done through 'fair' firms approved by the L.B.I.F. as such.

"As to Clauses 1 and 2, anyone can erect a building in accordance with these conditions without appeal to the L.B.I.F. or any other body.

As to Clauses 3 and 4—*i.e.*, that materials are to be supplied and sub-contracting done only by firms approved by the L.B.I.F., these are conditions which no business man would even think of accepting. In fact, it is practically on a parallel with a cook you engaged stipulating that the only condition she could enter your service was that she should nominate the person from whom you should purchase your food and say how much you should pay for it; or your gardener is to have the right to insist as to who shall build your greenhouses and at what cost.

"If these are the advantages to be gained by the abolition of the building contractor, then he need have no fear for his existence, and can well afford to continue to ignore the L.B.I.F. or any similar body."

Mr. Lawrence had no hesitation in saying that work by direct labour would cost 25 to 30 per cent. more than if carried out by an associated building contractor. In short, the Association could not regard the matter seriously.

COUNSEL'S OPINION ON SOME LEGAL ASPECTS.

(*Specially Contributed.*)

Some of the heavy burdens of liability of which the contractor ordinarily relieves the building owner, and which the building owner must himself assume when he dispenses with the building contractor, are set forth in the following extracts from an opinion which we have expressly obtained from Mr. W. Valentine Ball, M.A., barrister-at-law:

"There are," Mr. Ball writes, "a great many losses which fall, at any rate, in the first place, upon the builder. He is compelled 'to provide everything necessary for the proper execution of the works.' That means he has to provide scaffolding, gantries, and builders' material of all kinds, which during a protracted strike may lie idle for a considerable time. He has to pay the wages of a general foreman. He has to insure and keep insured a large number of workmen from accident. True, there is no risk of accident when there is no man on the job; but premiums are exacted and paid, nevertheless. He is also made responsible (by Clause 21 of the Form) 'for all injuries caused to the buildings, the subject of this contract, by frost or other inclemency of weather, and shall reinstate all damage caused by the same.' It has been pointed out that these losses—that is to say, those which result from the
up of builders' capital, insurance, ar
cost of making good injuries to buil
by frost, etc., fall, *in the first place,*
the builder. Can they be ultin
charged to the employer? If they c
cover from him, there appears to be
reason to think that elimination c
contractor and the direct employme
labour by the employer would alter t
cidence of the loss resulting from a
trous strike."

Further important developments m
expected this week, as the question
general lock-out was considered a
quarterly meeting of the National Bo
Conciliation held on Monday, whil
Board were to receive, on the foll
day, a deputation from some of the i
tant trade unions involved in the disp

COMPETITIONS.

Grove Hall Church, Schools, etc.,

In the limited competition recentl
for the above buildings, the assesso
W. H. Dinsley, has given his awa
favour of the design submitted by M
George Baines and Son, of 5, Cle
Inn, Strand, London. The estimate
of the buildings is £6,400.

Estate Development, Lynn.

Lynn Municipal Charity Trustees
had before them competitive plans f
development of their land at the ba
the east side of Tennyson Avenue, wi
adjoining plot at the corner of Ten
Avenue and Gaywood Road, and a
the land opposite the Ship In
Gaywood Road. On the recomm
tion of the sub-committee it
been decided to award the first prize
to Mr. L. F. Eagleton, the second of
Messrs. MacAlister and Skipper, ar
third of £5 to Messrs. Jarvis and Sor
Eagleton to be employed as architect
laying-out of the estate.

A Correction.

In our article on the designs for th
fast competition, which was publishe
week, design No. 27 was erroneous
ferred to as that of Messrs. G. a
Lodge. The correct name is M
Lucas and Lodge, Gray's Inn S
London.

THE R.I.B.A. ELECTIONS AN REGISTRATION.

The result of the R.I.B.A. electi
awaited with considerable excitemer
the composition of the new Council w
termine the official attitude of the In
towards Registration. Although noth
definitely known, there is good gr
judging by reports received from all
of the country, for supposing that th
Council will consist very largely o
Registrationists. If this surmise is
rate, as we believe it to be, the "Cha
policy is almost certain to be abando

Big Contract for Asbestos-Cement

We understand that Messrs. Wilso
Co., of 79, Queen Street, Cheapside,
have just secured the contract for a
asbestos-cement sheets and tiles re
in connection with the new barra
Farnborough—approximately, 70,
roofing and 300,000 ft. of sheeting.
is the fourth similar contract that M
Wilson and Co. have secured durin
last twelve months.

FERRO - CONCRETE

HENNEBIQUE SYSTEM

CONSTRUCTIONAL WORK THROUGHOUT IN FERRO CONCRETE

—— BY ——

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ELECTRICAL NOTES.

G.E.C. Accessories.

The General Electric Co., Ltd., 67, Queen Victoria Street, E.C., have always been in the vanguard of progress in regard to accessories for electric lighting, and every now and then they introduce something new in this direction, although it might be thought that there was nothing more that could be designed. A switch of very neat appearance and construction is the new suspension switch for through wiring with flexible wire. It is of special convenience for controlling a circuit close to the current-consuming device, and where a key-switch lampholder cannot be employed. This suspension switch may, of course, be used with pendants, or can be inserted in the flexible wire supplying table or floor lamps, etc. The body of the switch is made of non-inflammable imitation ivory, and the push-button bar is of the same substance, although real ivory can be supplied if required. It is only 2¼ in. long and ¾ in. diameter, but is efficient both electrically and mechanically. The wiring is quite easy, the terminals being arranged at each end, with an effective cord-grip. This device can also be used as an ordinary pear switch by short-circuiting the terminals at the lower end with a short piece of wire.

A combined switch and wall plug has been added to the series of "Slick" switches, having all the features of the latter, whilst it can be arranged so that the switch will control a lamp circuit and the socket a second circuit, so that the switch itself controls both. Another "Slick" switch has been added for use with flush switch plates for two-way working. A special type of bayonet lampholder, suitable for use with radiators, signs, etc., has been introduced by the G.E.C. It is of solid construction, and wiring is facilitated owing to the base being quite open. Another form of lampholder is also offered, known as the "Excel" and having a deep recess at the back for the wires.

"Nightingall" Automatic Cookers.

The same company has put on the market a new form of cooker and steamer with automatic control. The cooker is made of an angle-iron frame, double-cased with sheet metal and lagged. The heating element is fixed in the bottom, protected by a wire guard, and rated at 1,800 watts. A mercury thermometer, fitted at the back of the cooker, controls the heating element and gives gradations of 200 300, 400, and 500 deg. F. This is effected by the column of mercury actuating a solenoid switch, which cuts off the current directly the heat of the oven has reached the predetermined temperature. The steamer is similar in construction, but smaller, and automatic control is given with two temperatures—namely, high, which is equivalent to a steam pressure of 2 lb. or thereabouts, and low, which is just over 212 deg. F. The heater is rated at 800 watts, and is of the immersion type, being fitted in a water space at the bottom. The advantage of this automatic control is, of course, that the operator requires no special knowledge and that the apparatus is therefore practically foolproof.

The Bachalet Elevated Railway.

During the time that this device was being shown in London recently a great deal of nonsense was, as usual, publi by some of the daily papers. Indeed, " Times " was the only daily paper that with the matter seriously and treated subject in proper perspective. It announced by some of the lay Press M. Bachalet had invented or discove the force by means of which copper or rings were repulsed by an ele magnet in which an alternating field induced. Naturally, it is conceivable few laymen have seen the manifestati this force, but it was discovered years and is applied for many useful purp Again, magnetic propulsion of a body no means new. The scheme, with its gestion of a transporter speed of 300 an hour, is certainly a very intere scientific device.

SURVEYORS' INSTITUTION

The results of the recent examinatio the Surveyors' Institution include the lowing list of winners of prizes:

Final:—Crawter prize, Leonard Hempson, Ipswich; Galsworthy Hubert John Smith, Blackheath.

Intermediate:—Institution prize, Allen Chapman, West Hampstead; sp prize, Edmund Louis Harison, Ha stead. Non-Students: Special prize constructive and working draw Reginald Percy Chamberlain, Notting Beadel Prize, Robert Grafton Gale, N ham Courtenay, near Oxford; special for quantity surveying, Louis Wi Jukes, Southampton; Driver Prize Penfold Silver Medal, Alfred Scho York.

Scottish Candidates:—Scottish James Smith Morrison, Glasgow.

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8/6

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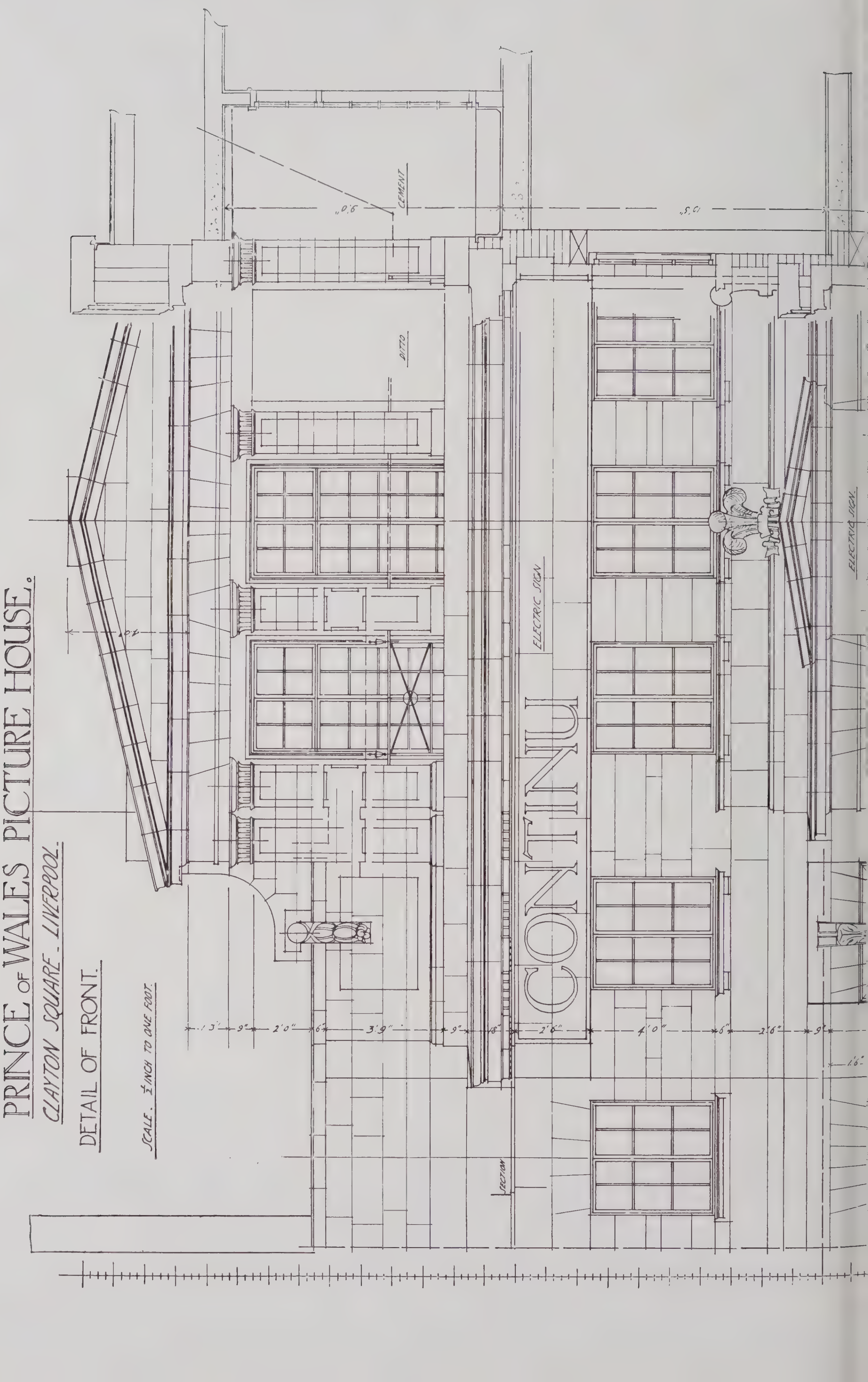
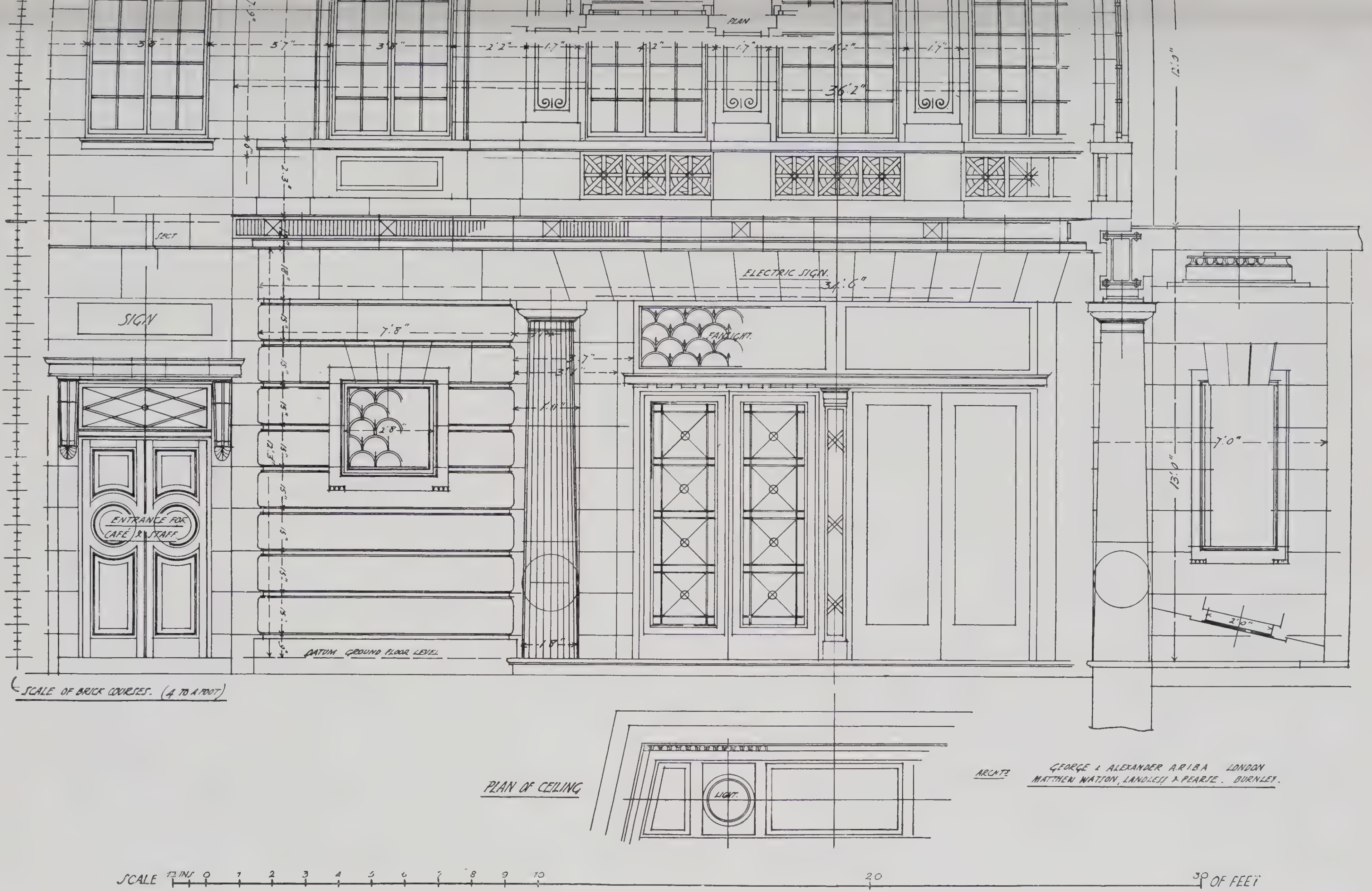
GLASGOW: 72a, Waterloo Street.
NEWCASTLE: 61, High Bridge.
BRISTOL: 11, Denmark Street.
LIVERPOOL: 1, Dawson Street.
NEWPORT: 190, Commercial Road.
LEEDS: 6, White Horse St., Boar Lane.
SWANSEA: 14, Heathfield Street.
CARDIFF: 4, Westgate Street.

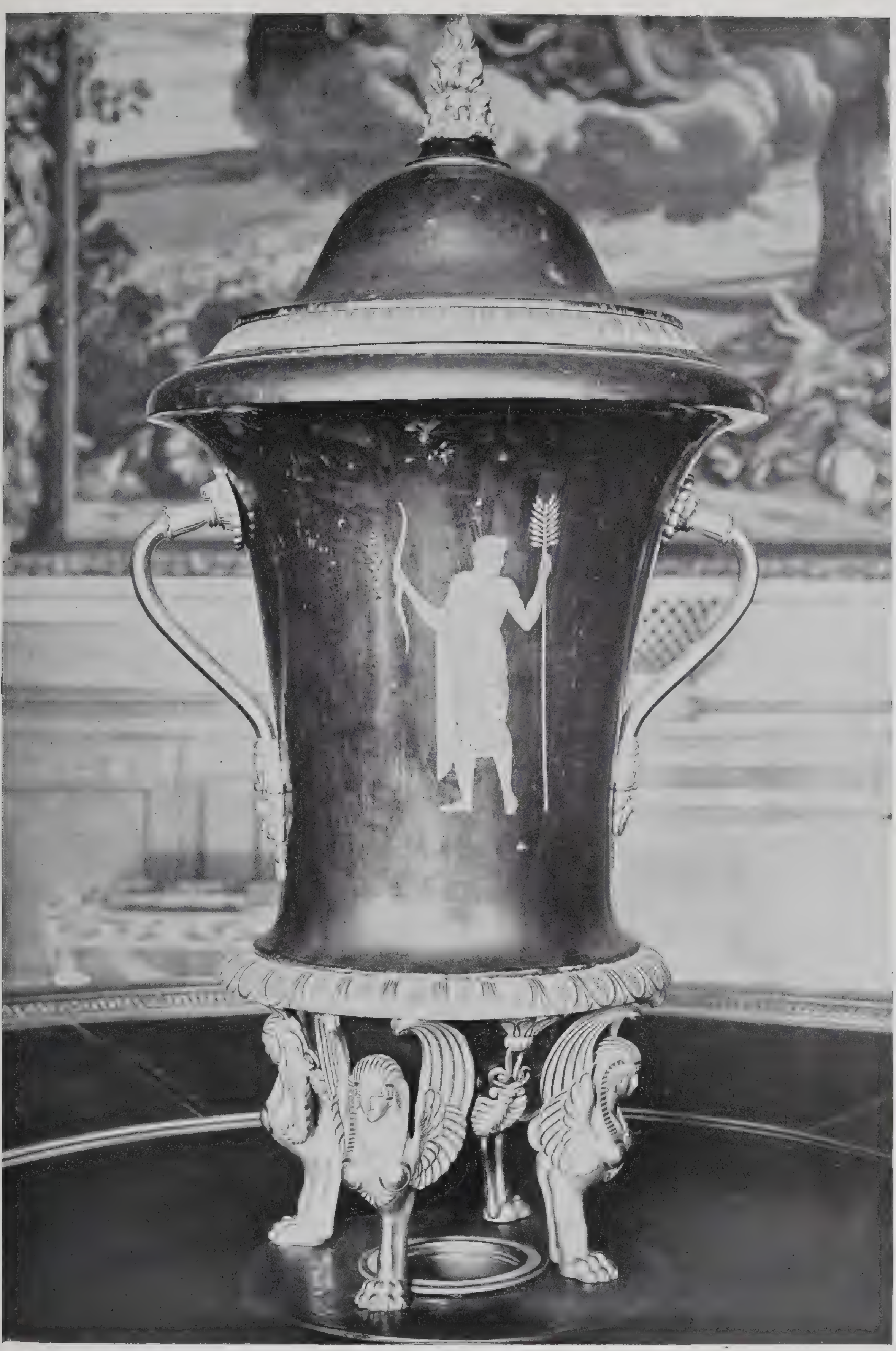


PRINCE OF WALES PICTURE HOUSE.
CLAYTON SQUARE. LIVERPOOL.
DETAIL OF FRONT.
SCALE. ½ INCH TO ONE FOOT.

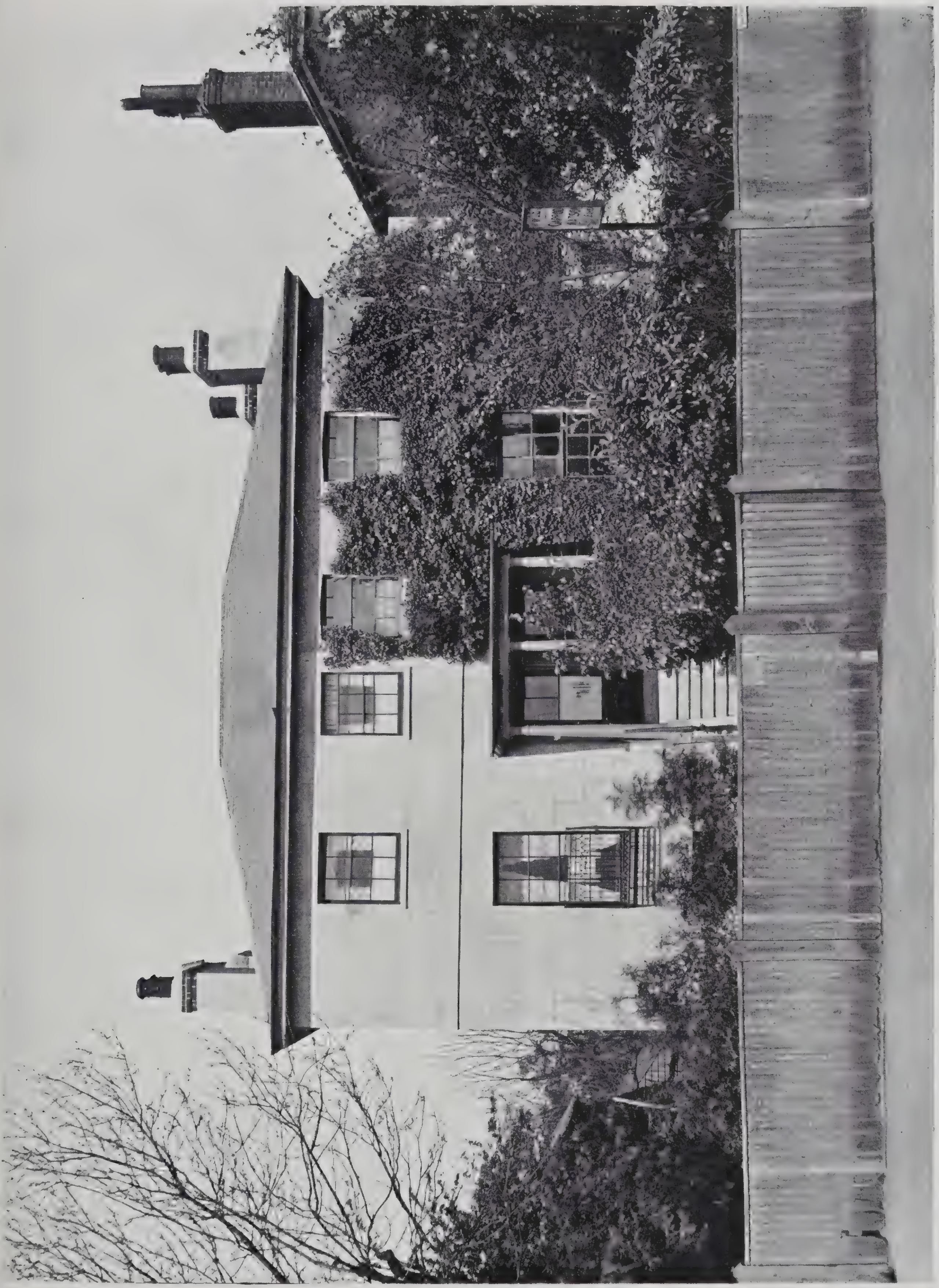

PLAN
3'8"
3'7"
3'8"
2'2"
1'7"
1'2"
1'7"
4'2"
1'7"
36'2"
12'3"
6"
2'3"
SECT
ELECTRIC SIGN.
34'6"
SIGN
7'8"
FANLIGHT.
3'7"
3'4"
2'8"
1'11"
7'0"
13'0"
ENTRANCE FOR CAFÉ & STAFF.
1'8"
2'0"
DATUM GROUND FLOOR LEVEL
SCALE OF BRICK COURSES. (4 TO A FOOT)
PLAN OF CEILING
LIGHT.
ARCHTS
GEORGE L. ALEXANDER A.R.I.B.A. LONDON
MATTHEW WATSON, LANDLESS & PEARSE. BURNLEY.
SCALE 12 INS 0 1 2 3 4 5 6 7 8 9 10 20 30 OF FEET

WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XXVIII.—PRINCE OF WALES PICTURE HOUSE, CLAYTON SQUARE, LIVERPOOL.

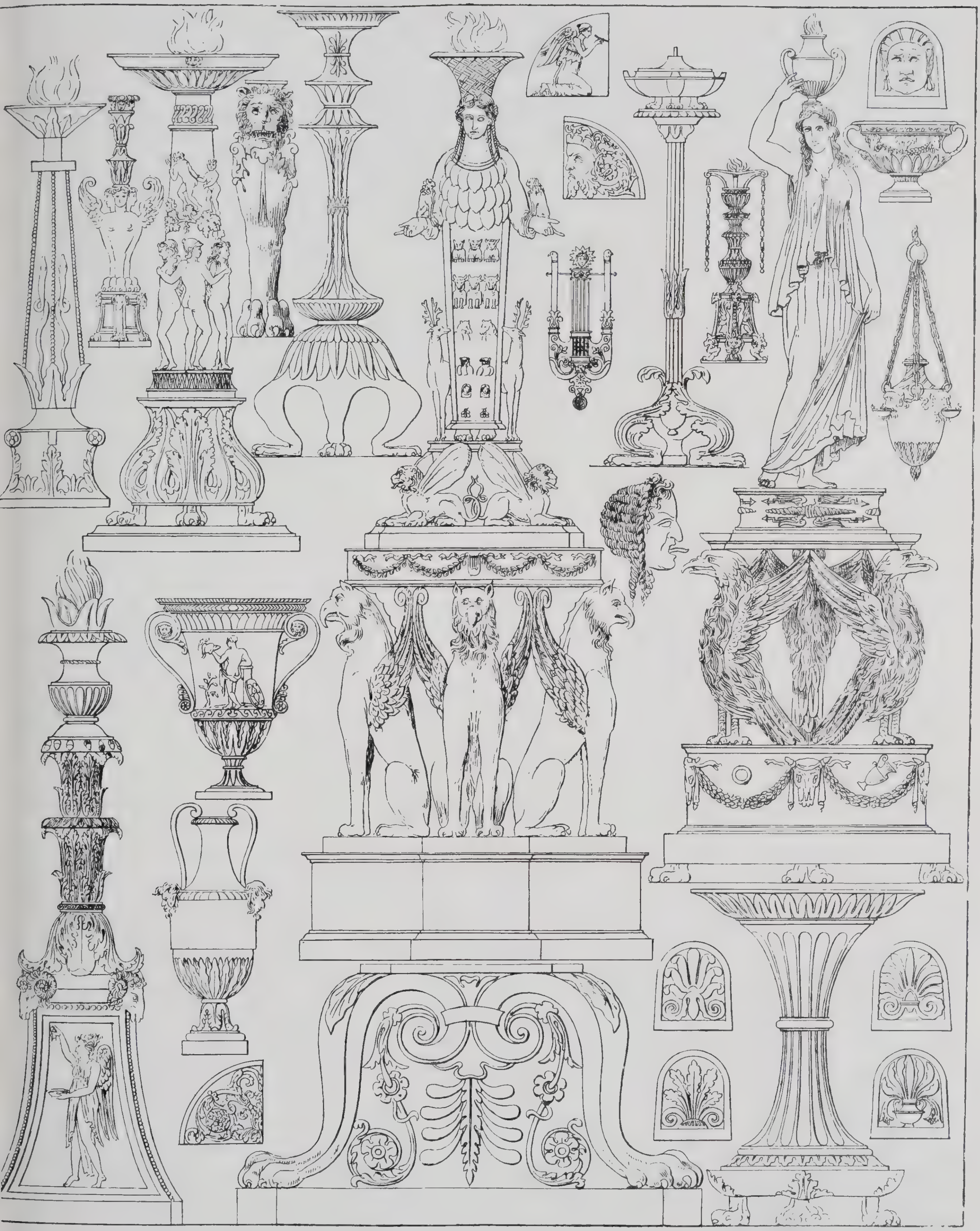
GEORGE L. ALEXANDER, A.R.I.B.A., AND MATTHEW WATSON, LANDLESS, & PEARSE, ARCHITECTS.



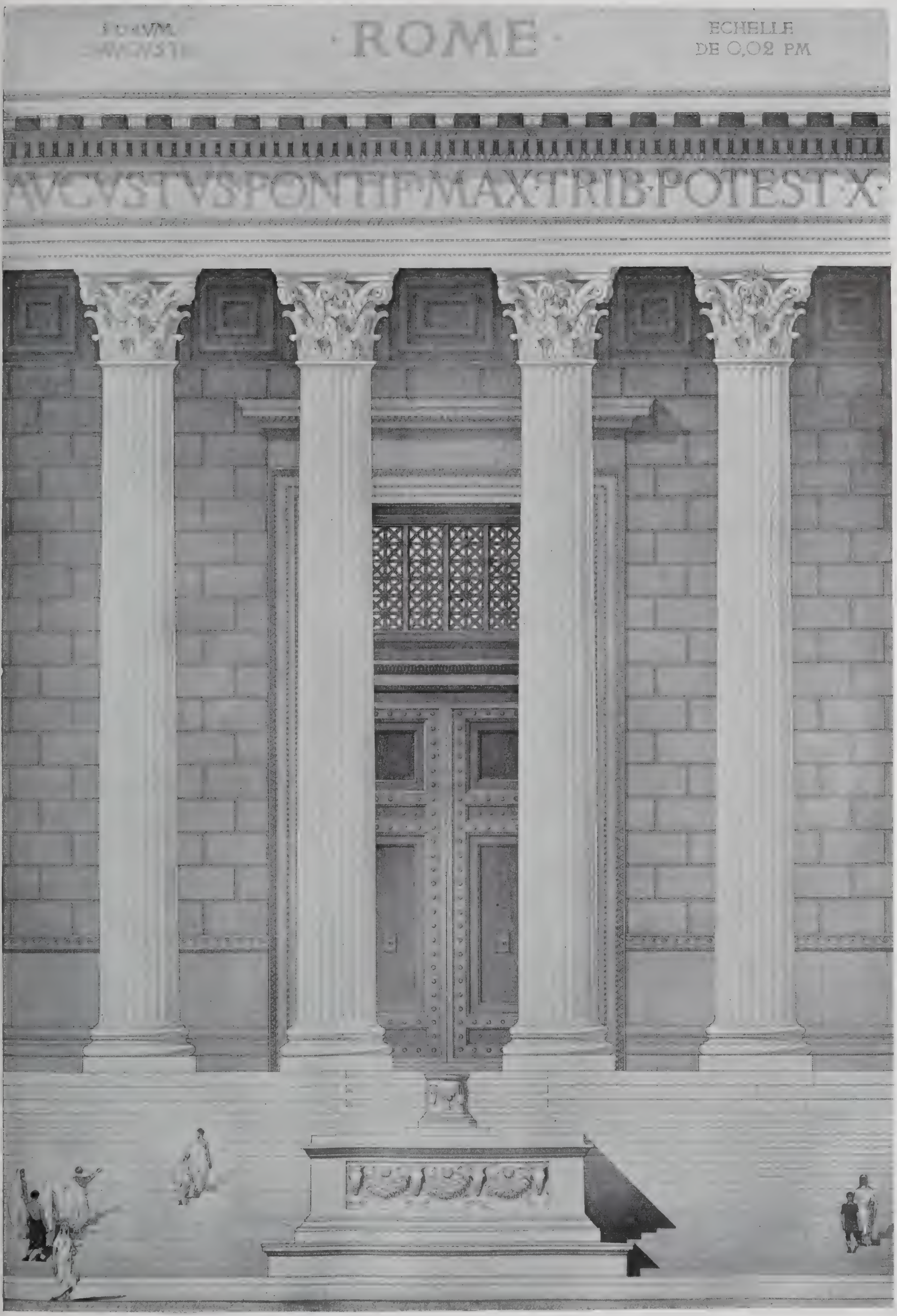
VASES. IV.—EMPIRE VASE AT FONTAINEBLEAU.



SMALL HOUSES OF THE LATE GEORGIAN PERIOD. XII.—PAIR OF SEMI-DETACHED HOUSES, ESHER, SURREY.



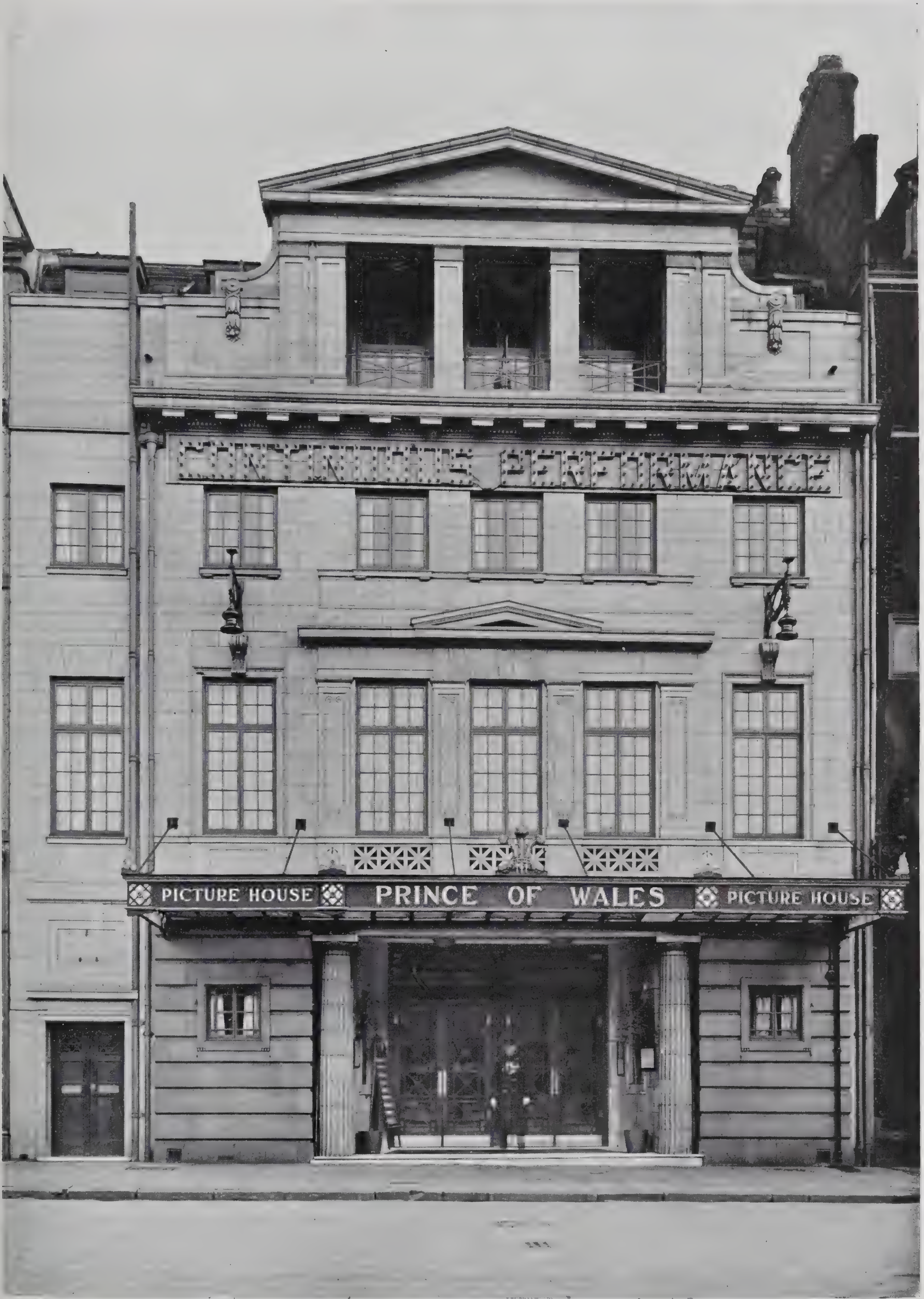
COTTINGHAM'S DESIGNS FOR IRONWORK. XV.—LAMPS AND STANDS, CANDELABRA, TRIPODS, VASES, AND VARIOUS ORNAMENTS.



STUDENTS' DRAWINGS. XIX.—TEMPLE OF MARS VENGEUR.

BY B. CHAUSSEMICHE (GRAND PRIX DE ROME).

(Reproduced by courtesy of the Department of Architecture, Massachusetts Institute of Technology.)



CURRENT ARCHITECTURE. LXVII.—PRINCE OF WALES PICTURE HOUSE, CLAYTON SQUARE, LIVERPOOL.

GEORGE L. ALEXANDER, A.R.I.B.A., AND MATTHEW WATSON, LANDLESS, & PEARSE, ARCHITECTS.

FOR SCHEMES PREPARED BY OWNERS AND PROPOSED TO BE ADOPTED BY LOCAL AUTHORITIES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (England and Wales), 1910.

Compiled by R IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield,* and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS. L.A. — Local Authority. L.G.B. Local Government Board. C.C.= County Council. Article or Art. = The Articles of the Town Planning Procedure Regulations (England and Wales, 1910. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = An Owner's Scheme proposed to be Adopted by an L.A. under the Act of 1909. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets

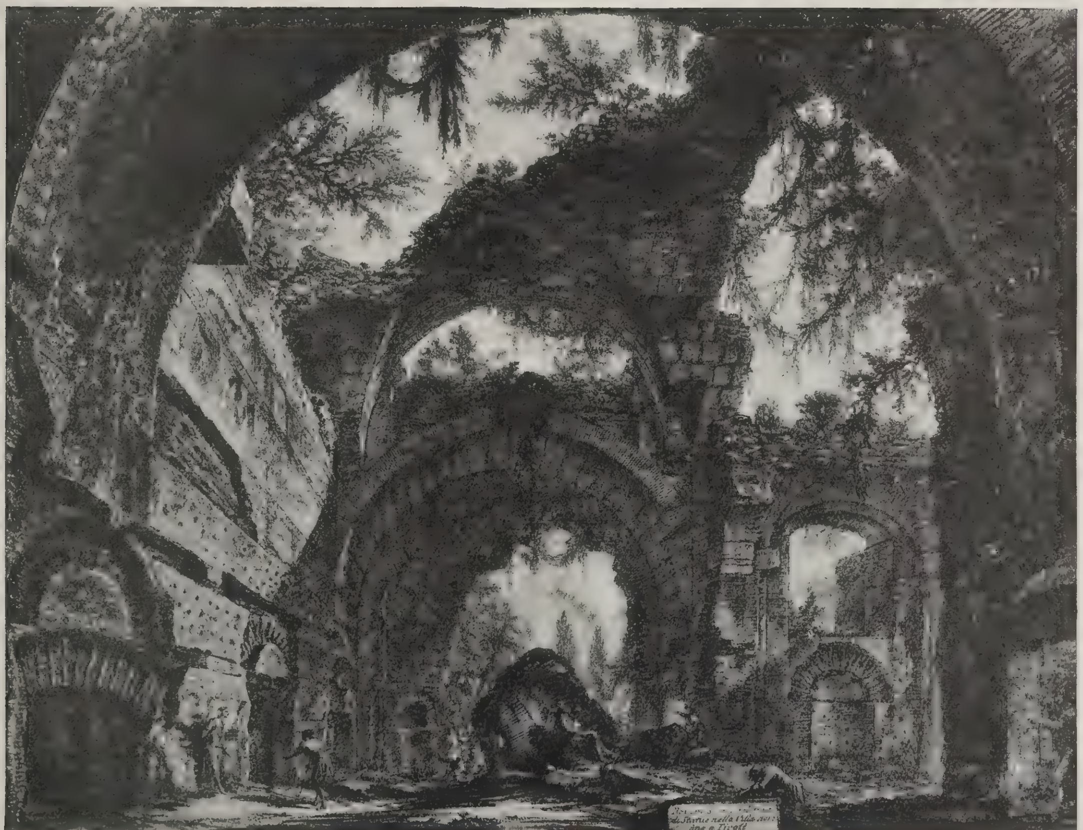
No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 1. Consideration of proposal of L.A. to apply to L.G.B. for authority to adopt a scheme.	Resolution of L.A. deciding to consider a proposal to apply for authority to adopt a scheme, and authorising Town Planning Committee to commence proceedings set out in Articles i., ii., and iii. This is the Resolution from which the seven days referred to in Article ii. (see Stage 1, Col. 3 (*a*)) commences to run. [Art. ii.]	N.B.—For Mode of Service of Notices see Art. xxx. (*a*) Within SEVEN DAYS serve Notice of Intention upon any other Council any part of whose area is proposed to be included in the scheme. [Art. ii.] (*b*) Serve Notice of Intention upon Owners, Lessees, and Occupiers and any other Council interested. Also upon C.C. if any main road affected. [Art. i. (*a*)] (*c*) Send similar Notice of Intention where necessary to (1) Board of Agriculture and Fisheries: (2) Commissioners of Works; (3) Board of Trade; (4) Light Railway Commissioners. [Arts. xxviii. and xxix.] (*d*) Advertise Intention in Local Paper. [Art. i. (*a*)] (*e*) Furnish Certified Copy of Map No. 1 to any other Council, any part of whose area is proposed to be included in the scheme. [Art. i. (*d*)]	(*a*) Meeting of Owners, Persons, and Councils interested. [Art. iii.] (*b*) Conferences with Owners, Persons, and Councils interested to consider objections and secure co-operation. [Art. iii.]	(*a*) By Notice served at least FOURTEEN DAYS before meeting. [Art. iii.] Send Notice of Meeting where necessary to (1) Board of Agriculture and Fisheries; (2) Commissioners of Works. [Art. xxviii.] (*b*) As required by Officers concerned of L.A. [Art. iii.]	Not later than first Notice served under Article i. (*a*) deposit Map No. 1 for free inspection and explanation at convenient place and keep deposited for ONE MONTH from last Notice served under Art. i. (*a*). [Art. i. (*b*)] N.B.—For Contents of Notice refer to Art. i. (*c*)			

CHART OF TOWN PLANNING PROCEDURE FOR OWNERS' SCHEMES, TO BE ADOPTED BY LOCAL AUTHORITIES—STAGE 1.

THE
ARCHITECTS' & BUILDERS' JOURNAL.

Wednesday, June 17, 1914. Volume XXXIX. No. 1015.

No. 89.



(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

JUNE 17, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1015.

On Form, Texture, Tone, and Colour.

MANY of the qualities that may distinguish a work of architecture do not readily lend themselves to definition. Our art may be compared to a territory vast in extent and vague in outline that has not given up its secrets nor yielded itself to the explorer's measuring-rod, a territory containing large tracts guarded by thorny forests that have never yet been penetrated by even the boldest. The task of the traveller in these difficult regions of æsthetics is rendered all the more arduous because he has to endure the gibes of those who have turned back from the quest at the first scratch of the bramble. The greatest enemies of architecture are the numerous critics who, having found that their first crude attempts at reasoning did not immediately give them a clue to the innermost meaning of art, presume to tell us that art is something mysterious, obscure, and ineffable, which cannot be elucidated by means of reason. They think it useless to try to discover the philosophic ordinances that determine the conditions of good building. Let us away, they exclaim, with definitions, analyses, and abstractions. Without laying claim to great fortitude of character or venturing to embark upon too difficult a journey of æsthetic exploration, one may yet contend that certain aspects of architecture can not only be isolated, thus becoming the subjects of intellectual abstraction, but that these aspects bear to one another a relation which can be declared explicitly.

Form, texture, tone, and colour are four such aspects; although they are all elementary ideas, themselves quite simple and unanalysable, there are marked differences between them, and it is of advantage to the designer to comprehend these differences as clearly as possible. Texture is really part of form, being but the build and structure of a surface; for every surface must be either smooth or in some measure uneven, rugged, or corrugated. Put a stone, a stick, or a piece of cloth under a microscope, and each of the tiny excrescences which before combined together to give a joint effect is seen in detail and is vested with an individual meaning. In these instances texture has developed into form. And a metamorphosis of the opposite kind is also possible. To the occupant of a small boat which happens to be caught in a storm, the rolling, crested waves appear as distinct entities, large, palpable, and significant, but if he is set upon a high cliff and scans the broad, broken expanse in front of him, he no longer pays heed to any particular wave, for the agitation of the waters has resolved itself into a magnificent texture. To pedestrians a city is an assemblage of architectural forms, but to a balloonist it might appear as just a grey roughness upon the earth's crust.

Texture lends interest to a building. There are occasions where one does not wish to use ornament, but where a perfectly flat plane would give the effect of dulness. Here vermiculated stonework is exceedingly useful. As a general rule, in designs of great refinement smooth materials are preferred, for attention must not be attracted from the form. Stucco or fine ashlar are suitable for buildings of the first rank, especially if they be in a town, for there a superab
ance of detail and of incident renders necessary
provision of smooth surfaces on which the eye may
with relief.

The same physiological requirement determ
fashions in dress; and at social functions, suc
dances, where many people are closely congreg
together, the men are dressed in a smooth cloth,
women often affect silks and satins. On the cou
side, however, the roughest tweeds are approp
A rough-cast building in a great city is like a cou
cousin who has turned up at an at-home dressed
tarpaulin jacket. On the other hand, a too g
material which has reflective properties is as obtr
as a coarse one, and polished granite used exter
in a building is an abomination. In interiors poli
stones and tiles are defensible, because they can
a harmony by themselves, and are in no dang
conflicting with other buildings of a different text

Let us next consider the relation between colou
form. Now, some questions are illogical, and co
quently they do not admit of logical answers.
instance, it is useless to inquire whether the heig
breadth of a house could more easily be dispe
with, or whether the key is prior to the lock. It is
an unprofitable task to try to determine whether c
is more important than form; these two elements
be considered separately, but they cannot be arra
in an order of rank.

Buildings can exist without colour, and for
periods of the day we do, in fact, see them in this c
tion. At twilight colour tends to fade, and everyt
is tinged with a sombre hue: we are left wi
symphony in black, white, and grey. But alth
colour is not an indispensable feature in a de
especially in a design of three dimensions, it must
be regarded as an element that is vested with
significance. Colour can do little to make an arch
tural composition, but it can do much to mar it.
some respects this element may be compared to
vention in conduct, and a sense for colour resemb
delicate intuition with regard to social values.
sionally a man builds up for himself a reputatio
administrative ability, statesmanship, or sound l
ing, but one day he commits some outrag
breach of etiquette! Then his career is irretriev
ruined, and his conspicuous talents count for not
St. Paul's Cathedral is a work of genius, a st
fabric distinguished for the harmony of its parts
cover it with bright blue enamel and who woul
found to admire it! Such an offence would be a s
offence, for the building would express an utter ne
of its neighbours. A blue St. Paul's Cathedral
behind a blue Ludgate Hill, and a blue railway br
decoratively portrayed on a plate or teacup, migh
tolerable enough; the monochrome Chinese w
patterns are not true to nature, but they are
delightfully pictorial. In the case we are discus
the Cathedral, instead of being the most illust
member of a concourse of buildings, has repudiate
environment altogether; instead of lawful domin
we have flagrant defiance. Again, if one cupola

ited green and the other yellow and the dome itself
nilion, the result would not be pleasing. But as
adays we hear so much said in disparagement of
dour Puritan spirit of Englishmen, which prevents
n from appreciating the charm of colour, it is
ible that even this architectural harlequinade
ld be defended by some. The charge of Puritan-
however, will presently become quite unjustifiable,
our streets will bid fair to be a veritable hotch-
h of the crudest and most discordant tints, brick,
-cotta, painted woodwork, and, worst of all,
rtisements all vying with each other in the effort
rike the highest chromatic note. It is obvious that
e order must be introduced. Much would be
ed if all bright colours in streets were confined to
area below first-floor level. Then the people, the
cular traffic, and the contents of the shop windows
ld provide the requisite note of colour, while the
r part of the façades would perform the function
foil. The motley of building materials now in use
ates against the possibility of any real harmony
town. If the employment of stucco for structures
e lighter kind were once more to become general
mense improvement would be effected, especially
e tone of our streets, which now lacks homogeneity
use of the inky blackness of nearly all the build-
whose exteriors are not painted from time to time.
ne is dependent upon the degree of light that is
ted by a surface. Of all the elements constituting
rchitectural design it is the least within the control
e architect. On most occasions the tone is kept
in order that the shadows may stand out in high
f. Colour, texture, and tone are but means of
hasising form, and their wrong uses are nearly all
o a failure on the part of designers to regard their
compositions as but parts of a larger whole.

C. N.

The R.I B.A. Elections.

RITICAL issues being in the balance, the results
of the R.I.B.A. Council election are this year
invested with exceptional interest. Last week
entured to anticipate that the new Council would
a Registrationist complexion, and a comparison
e *personnel* of the old Council and the new, as
ited in parallel columns in a later page of the
nt issue, will show, to those who happen to know
the respective names portend, that our forecast
vell founded. Indeed, the mere fact that a dozen
bers of the old Council have been superseded is
elf sufficiently significant of the trend of opinion.
ly the majority of the voters are in favour of a
stration Bill rather than of a revised charter. Of
e, even if the members of the new Council were
strationists to a man, that fact would not actually
mine the issue. The real battle has still to be
t and won; and whether the Registrationists or
harterists are ultimately to win it, or whether both
nes are to fall through, seems to depend upon
sort of impression can be made hereafter on the
mass of members who upon this momentous occa-
vould not take the trouble to vote, and whose con-
indifference may possibly act as a dead weight
st any sort of forward movement. As these
rably apathetic gentlemen are nearly twice as
as those who voted, it is easy to see that we are
et out of the hurly-burly. Registrationists, how-
are certainly entitled to assume that in this
ce "silence gives consent," since most of those
bstained from voting must have been very well
of the impending fate of the nominees of the old
cil, and the abstentionists, nevertheless, have
a sublime indifference to it. As an expression
will of the really effective forces, however, the
leaves no shadow of doubt as to the preponder-
of the Registration, and this result places the
ute in a very difficult position.

House Names.

THE British public is rarely guilty of deriding itself, but for many years past it has poured scorn upon its own foibles in the matter of naming houses—without, however, making any serious effort at reform. Thus the old absurdities of nomenclature remain, and fresh ones are perpetually being added wherever any new estate is developed. A Cockney villa with a front outlook on to another of its own kind and a back view of a waterworks or a brickfield becomes "Glen View" or "Killiecrankie"—English suburbanites have a curious fancy for Scots place names—or "The Homestead," which the building in no way suggests, or something else to which it bears no sort of resemblance. A writer in "The Times" maintains, very rightly, that the question of names ought seldom to arise in the case of houses in streets or roads on the outskirts of a town, which ought to be firmly numbered. We would go further and suggest that house names ought to be prohibited altogether in towns, not merely because they are so often inapposite and silly, but because they exercise a subtly deleterious influence upon the architecture.

A London Chair of Town Planning.

THE decision of the Senate of London University to institute a part-time Chair of Town Planning has been generally applauded. The post, which is worth £400 a year, will of course be filled by an architect and, one may suppose, by one who has acquired some reputation as an exponent of civic design; but whoever is appointed, the creation of this new office marks an advance in architectural education, which is full of significance. Hitherto, the special study of town planning has not been greatly encouraged by the English Universities. The Town Planning Department of the Liverpool School of Architecture stands almost alone as a successful experiment in this direction; one may assume that the latter's popularity has been among the causes of the innovation at London University, although the general and rapid increase of interest in the subject is doubtless the principal factor.

Circulation Figures.

IT is now two months since we took up the assertion of the "Building News" that it rejoices in "the largest sale of any professional journal published." We have challenged our contemporary repeatedly to produce its nett circulation figures in support of such a claim, but the "Building News" has continued to maintain a silence which may be sometimes golden, but which in this case leaves one with the impression that it does not wish to suffer the test of a comparison of its own circulation figures with ours. We have done all we can in emphasising the importance of this subject, and have given our contemporary every opportunity to substantiate its claim, but without avail, though certainly we have not noticed any further announcements of the kind alluded to. Readers must draw their own conclusions. It only remains now for us to direct the attention of advertisers to the necessity of ascertaining what is the exact sale of a journal. A guarantee, indeed, of nett circulation should be made a condition of any advertising contract. Those journals which make excuses in regard to this matter, and offer explanations why they never disclose their circulation figures, at once proclaim that they have qualms about exposing their position. Advertisers formerly were satisfied with verbal information as to circulation, but a much keener spirit is abroad to-day, and no journal can hope to maintain its position on past achievements. It must be ready to offer actual evidence of its current position, and to substantiate general statements by precise figures.

R.I.B.A. ANNUAL ELECTION RESULTS.

We publish below the results of the R.I.B.A. Annual Election, which were announced at the Business Ge
Meeting held on Monday, June 8. We also give the list of members of the Old Council for the purpo
comparison with the new. The figures in parenthesis after names denote the number of votes obtained.
biographical particulars of the majority of the members are also given.

THE NEW COUNCIL, 1914-15.

President.
ERNEST NEWTON, A.R.A.

Vice-Presidents.
A. W. S. CROSS, M.A.Cantab.
J. ALFRED GOTCH, F.S.A.
GEORGE HUBBARD, F.S.A.
H. V. LANCHESTER.

Past-Presidents.
REGINALD BLOMFIELD, R.A.
LEONARD STOKES.

Hon. Secretary.
E. GUY DAWBER.

Members of Council.
STANLEY D. ADSHEAD, M.A. (477)
T. EDWIN COOPER (604)
W. CURTIS GREEN (370)
HENRY T. HARE (359)
E. VINCENT HARRIS (421)
A. R. JEMMETT (377)
D. BARCLAY NIVEN (506)
A. N. PATERSON, M.A., A.R.S.A. (451)
SYDNEY PERKS, F.S.A. (528)
C. H. B. QUENNELL (538)
HARRY REDFERN (414)
A. E. RICHARDSON (451)
W. GILBEE SCOTT (451)
E. R. ECKETT SUTTON (363)
W. J. TAPPER (572)
PAUL WATERHOUSE, M.A.Oxon. (388)
HERBERT W. WILLS (454)
PERCY SCOTT WORTHINGTON (494)

Associate Members of Council.
ROBERT ATKINSON (411)
W. R. DAVIDGE (528)
L. ROME GUTHRIE (463)
HERBERT SHEPHERD (511)
S. D. TOPLEY (448)
HERBERT A. WELCH (418)

THE OLD COUNCIL, 1913-1914.

President.
REGINALD BLOMFIELD.

Vice-Presidents.
ERNEST NEWTON, A.R.A.
A. W. S. CROSS, M.A.
GEORGE HUBBARD, F.S.A.
H. V. LANCHESTER.

Past Presidents.
T. E. COLLCUTT.
LEONARD STOKES.

Hon. Secretary.
E. GUY DAWBER.

Members of Council.
H. PERCY ADAMS.
WALTER CAVE.
THOMAS EDWIN COOPER.
H. P. BURKE DOWNING.
W. A. FORSYTH.
HENRY T. HARE.
GERALD HORSLEY.
ARTHUR KEEN.
C. STANLEY PEACH.
SYDNEY PERKS, F.S.A.
C. H. B. QUENNELL.
EDWIN A. RICKARDS.
H. D. SEARLES-WOOD.
WALTER TAPPER.
SEPTIMUS WARWICK.
W. HENRY WHITE.
EDMUND WIMPERIS.
WM. WOODWARD.

Associate Members of Council.
ROBERT ATKINSON.
G. L. ELKINGTON.
K. GAMMELE.
SIDNEY K. GREENSLADE.
EDWIN GUNN.
E. STANLEY HALL, M.A.

Mr. S. D. ADSHEAD, M.A., is Professor of Town Planning at Liverpool University. He was born in 1868, in Manchester. Having served his articles in that city, he began practice in London in 1896. His works include the Royal Victoria Pavilion, Ramsgate; Carnegie Library, Ramsgate; Bennett Steamship Co.'s premises, Tooley Street, London, E.C.; and houses on the Duchy of Cornwall Estate, Kennington.

Mr. REGINALD BLOMFIELD, M.A., F.S.A., Hon. Fellow Exeter College, Oxford, was born in 1856, and is the third son of the Rev. S. G. Blomfield, M.A., late Rector of Aldington, Kent. He was educated at Haileybury and Exeter College, Oxford. Having served articles with his uncle, the late Sir Arthur Blomfield, he studied at the R.A. schools and travelled abroad. He began practice in London, 1884, and was President of the R.I.B.A., 1913-14. He holds a Royal Gold Medal, and has written several monumental books on architecture, among them being "A History of the Renaissance Architecture in England," "Studies in Architecture," "The Formal Garden," etc. His executed works include numerous large town and country houses, memorials, and public buildings. He designed St. Paul's Cross.

Mr. EDWIN COOPER has served on the Council of the R.I.B.A. for the past two years, and at present is engaged upon several public buildings and private houses, including the Port of London Dock Offices, Trinity Square, and the Marylebone Town Hall.

Mr. A. W. S. CROSS, M.A., was born in 1860. He was articled to his father, and began practice in 1885, at Hastings. His literary works include "History of Architecture" and "Rome in the Augustan Age." Amongst his executed works are the Municipal School of Technology, Manchester; Memorial Laboratories, Aberystwyth University; almshouses at Wood Green; Shoreditch Hall, etc., etc.

Mr. W. R. DAVIDGE is a London district surveyor, and
present delivering a series of lectures in Australia on
planning. Has written a good deal on town planning su
and read a remarkable paper before the R.I.B.A. recen
"The Development of London and the London Building

Mr. E. GUY DAWBER was born in 1861 at King's Lynn,
folk. After serving articles in that town he began prac
Gloucestershire about 1890, and in London in 1891. He i
President of the A.A. (two years) and Past Vice-Pre
R.I.B.A. (four years). In 1884-5 he was awarded the Upp
Lower School Premiums at the R.A. Schools. His w
include "Stone Buildings of the Cotswolds," "Timber
in Kent and Sussex." He has designed a large amount of
tic and other work in various parts of the kingdom.

Mr. J. ALFRED GOTCH, F.S.A., was born in 1852. He wa
cated privately, and afterwards at Kettering Grammar S
University of Zurich, King's College, and A.A. After
articled to R. W. Johnson, of Melton Mowbray, he began
tice at Kettering in 1879. His writings include "The Bui
of Sir Thomas Tresham" and "Architecture of the Renai
in England." He has made some interesting discoverie
respect to Inigo Jones and Whitehall Palace.

Mr. L. ROME GUTHRIE, born in 1880, was educated at G
High School and Glasgow School of Art. Articled to
Leiper, R.S.A., he began practice in London 1906. Ar
to Royal Institution of Great Britain and to Port of L
Housing Authority regarding rehousing schemes in West
Woolwich, and East Ham. Gained "Greek" Thomson
ling Studentship.

Mr. A. R. JEMMETT was articled to the late J. J. Stev
and was assistant to the late W. F. Unsworth and to Mr.

ıllcutt. He was a student of the Westminster School of Art d of the Royal Academy, where he was awarded the English avelling Scholarship for design. He afterwards studied for a ort time in Paris. He was joint architect for the Tottenham uncil offices, fire station, and public baths, and is a member the Beaux-Arts Committee and of the jury of the Atelier.

Mr. H. V. **Lanchester** began his articles with his father in 79. While in the office of Mr. George C. Sherrin, F.R.I.B.A., met with Mr. Stewart, whom he later joined in a partnership which Mr. E. A. Rickards was subsequently admitted. In 12 Mr. Lanchester was appointed to advise the Government th respect to the site for the new Delhi. Works include Carf City Hall and Law Courts, Deptford Town Hall, Hull School Art, Wesleyan Church House, Third Church of Christ ientist, etc.

Mr. A. N. **Paterson**, M.A. (Glas.), A.R.S.A., was born 1862. He was educated at Glasgow Academy and Glasw University, afterwards becoming a pupil of Mons. J. L. scal at the Ecole des Beaux-Arts, Paris. Became assistant to essrs. John Burnet and Son, Glasgow, and subsequently to W. Edis and Sir Aston Webb, London. He began practice Glasgow in 1892.

Mr. **Sydney Perks**, F.S.A., P.A.S.I., F.S.I., was educated at ng's College School. Articled to Thomas Henry Watson, R.I.B.A. Has been surveyor to the Corporation of the City London since 1904. Publications include "Residential ats," "Dilapidations," "Party Structures," "London Build- Act," 1904. Works include residential flats, St. Mary's Insti- e, Putney, Weights and Measures Offices, a church near orsham, the restoration of the Guildhall, etc.

Mr. C. H. B. **Quennell** was born in 1872. Articled to Newan and Newman, beginning practice at Westminster, in 1896. 1895 he won the National Gold Medal for Architectural esign, S.K., and the R.I.B.A. Silver Medal in the same year. s publications include a "Guide Book to Norwich Cathedral," Modern Suburban Houses," and "Town Planning and Land nure."

Mr. W. **Gilbee Scott** was born in 1857. Educated professionally with the late Ewan Christian. Articled to E. Habershon and Brock, he afterwards began practice in London, 1881. In 1878 he received the R.I.B.A. Silver Medal for measured drawings.

Mr. **Leonard A. Stokes** was born in 1858. He came to London in 1871 and was articled to S. J. Nicholl in 1874. He acted as clerk of works under Street at Christ Church Cathedral, Dublin, subsequently working under Collcutt, Bodley, Garner, and St. Aubyn. He was President of the A.A. in 1889 and of the R.I.B.A. 1910-12. His works include many National Telephone Exchanges.

Mr. **Paul Waterhouse** is the eldest son of the late Alfred Waterhouse, R.A. He was educated at Eton and Balliol College, Oxford. He has contributed articles on architecture to the "Edinburgh Review" and to many other periodicals; also articles on town planning, and several lives for the "Dictionary of National Biography." Works include buildings for the Universities of Oxford, Manchester, and Leeds, Prudential Assurance Co., London Salvage Corps, etc.

Mr. **Herbert A. Welch** was born in 1883, and began practice in London, 1908. Works include Hendon Central Fire Station and many houses and cottages at Hampstead Garden Suburb and Ruislip.

Mr. **Herbert W. Wills** has held an appointment under Public Works Department of Hong-Kong. He practised in Vancouver, British Columbia, for a year, and studied in America; was for some time in the offices of McKim, Mead, and White. Won Donaldson Silver Medal, Architecture, University College. Appointed editor of "The Builder" February, 1913. Competitions won include: Public Baths, Chelsea; Housing Scheme, Chelsea; Police and Quarter Sessions Courts and Fire Station, Sunderland; Public Library, Greenwich, etc.

Mr. **Percy Scott Worthington** was born in 1864, and educated at Clifton College and Christ Church, Oxford. He began practice (1893) in partnership with his father in Manchester. He is a Past-President of Manchester Society of Architects; Silver Medallist, Essay, R.I.B.A.; Donaldson Medallist, University College. Works include Halifax Royal Infirmary; Hull Royal Infirmary (additions); Prestwich Union Infirmary, Blackley; Manchester and Salford Hospital for Skin Diseases, etc.

REPRESENTATIVES OF ALLIED SOCIETIES, COMMITTEES, ETC., 1914-15.

Representatives of Allied Societies.—G. C. Awdry (Bristol A.), R. Burns Dick (Northern A.A.), F. B. Dunkerley lanchester S.A.), Glendinning Moxham (South Wales I.A.), F. Watson (Sheffield S.A.), John Watson (Glasgow I.A.).

Representative of the Architectural Association.—H. ısten Hall.

Art Standing Committee.

Fellows: Walter Cave, E. Guy Dawber, H. P. Burke owning, W. A. Forsyth, Henry T. Hare, Gerald C. Horsley, V. Lanchester, Halsey Ricardo, H. Heathcote Statham, P. Warren. **Associates**: Robert Atkinson, Matthew J. awson, Sidney K. Greenslade, A. Wyatt Papworth, A. R. wys, A. Needham Wilson.

Literature Standing Committee.

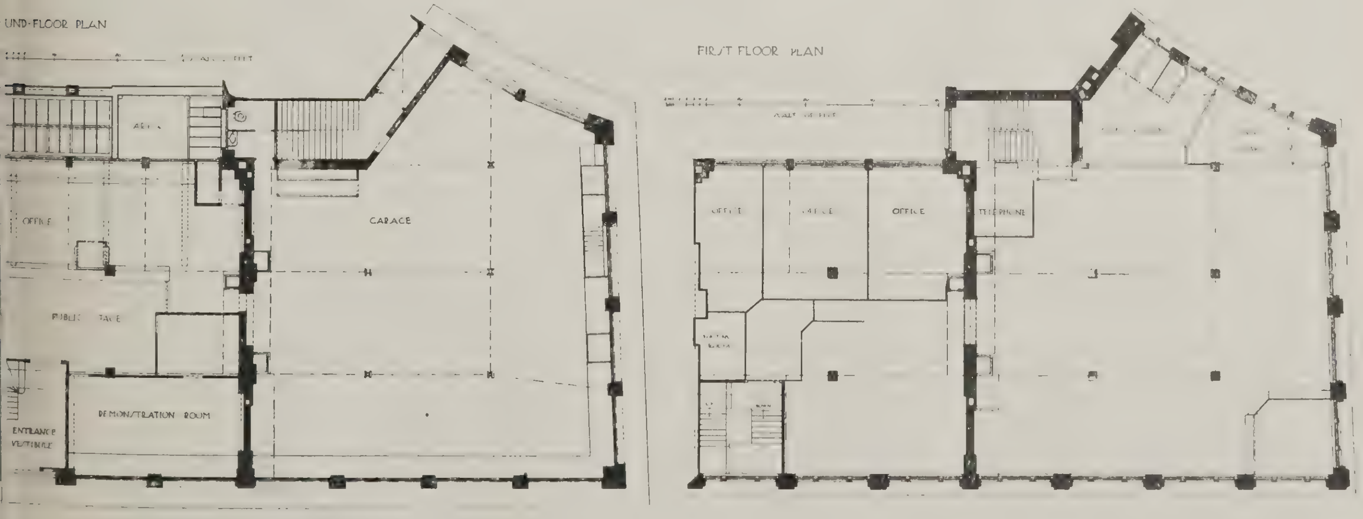
Fellows: Arthur T. Bolton, J. Alfred Gotch, A. E. chardson, E. A. Rickards, F. M. Simpson, R. Phené Spiers, Charles Spooner, Arthur Stratton, C. Harrison Townsend, Paul Waterhouse. **Associates**: M. S. Briggs, W. J. Davies, J. S. Lee, W. G. Newton, Herbert Passmore, W. H. Ward.

Practice Standing Committee.

Fellows: Max Clarke, H. O. Cresswell, A. W. S. Cross, Matt. Garbutt, Edward Greenop, George Hubbard, Sydney Perks, H. D. Searles-Wood, A. Saxon Snell, W. Henry White. **Associates**: H. W. Cubitt, P. M. Fraser, Edwin Gunn, H. A. Saul, J. D. Scott, Herbert Shepherd.

Science Standing Committee.

Fellows: H. Percy Adams, R. Stephen Ayling, A. O. Collard, Alfred Conder, W. E. V. Crompton, Bernard Dicksee, F. R. Farrow, George Hornblower, C. Stanley Peach, R. Elsey Smith. **Associates**: Robert J. Angel, H. W. Burrows, W. R. Davidge, G. Leonard Elkington, E. Stanley Hall, E. A. Young.



NEW PREMISES FOR THE BOSCH-MAGNETO CO., LTD., TOTTENHAM COURT ROAD, LONDON: GROUND- AND FIRST-FLOOR PLANS.

MR. ERNEST NEWTON: THE NEW PRESIDENT OF THE R.I.B.A.

AT a meeting of the R.I.B.A. held on Monday, June 8, Mr. Ernest Newton, A.R.A., was duly elected president for the session 1914-15. The Institute is to be warmly congratulated on its choice and election. The chair of the Institute is a position for which Mr. Newton is eminently fitted, no less by his distinction as an architect than by his engaging personality.

Mr. Newton was born in London in 1856, and was educated at a preparatory school at Blackheath, afterwards proceeding to Uppingham. In 1873 he was articled for a term of three years to the late Mr. Norman Shaw, with whom he stayed for a further three years, after which he began to practise on his own account.

Since that time Mr. Newton has acquired a very considerable reputation as an architect of domestic buildings, of which a large number have been erected from his designs in all parts of the country. Mr. Newton, indeed, is in the forefront of that distinguished brotherhood who in our own day have brought about a renaissance in English house building which is the object of world-wide study and admiration.

Mr. Newton's work, though of a distinctly individual type, shows a careful regard for the vernacular domestic styles. "Upton Grey," Hants, and "Ardenrun Place," Surrey, may be cited as fine examples of the two principal styles he has made his own — the first showing all the picturesque charm of the homely type of dwelling that developed in England during the Tudor period, the second following the more sedate and stately lines of the "Georgian" model.

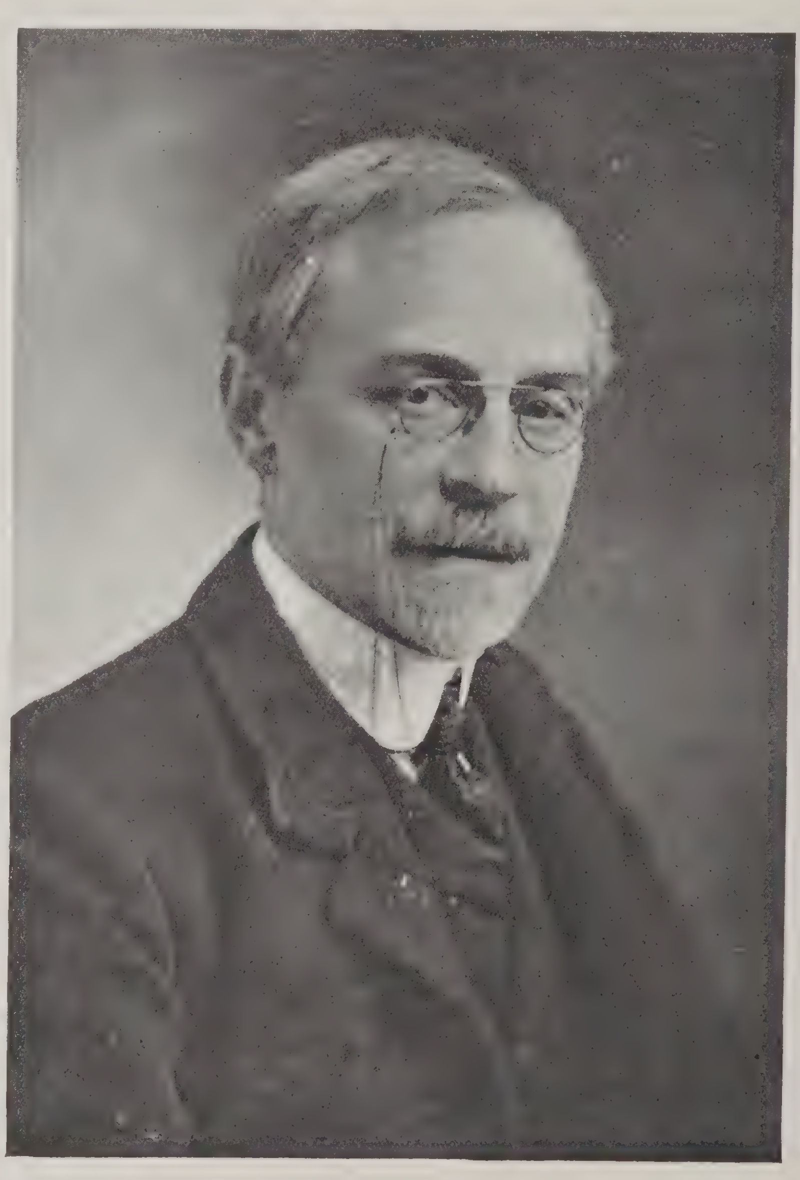


Photo: Elliott & Fry.

MR. ERNEST NEWTON, A.R.A., P.R.I.B.A.

Although Mr. Newton has specialised in domestic work, he has not neglected the more monumental side of architecture. In particular, he designed, in conjunction with Mr. Norman Shaw, an excellent office block at the bottom of St. James's Street, London.

Mr. Newton was closely identified with the formation of the Art Workers' Guild, which begain in quite a small way in the early eighties. It grew out of what was known as the St. George's Art Society, and was originally limited to architects, the meetings being held in the offices which Mr. Newton then had in Hart Street, Bloomsbu
Later on followers of other arts and crafts we
admitted, and the society developed and flourished.

In more recent years Mr. Newton joined the co
mittee of architects under whose direction t
"Architectural Review" was issued for a considerat
time. He was made an Associate of the Roy
Academy in 1911, and has for some time acted
Chairman of the R.I.B.A. Board of Architectu
Education.

Mr. Newton's principal works include: "Bulle
Wood," Chis
hurst; "Redcour
Haslemere
"Glebeland
Wokinghar
"Steep Hill," Je
sey; "Daw
House," Winche
ter; "Ardenru
Place," Surrey;
Swithin's Churc
Hither Gree
Chapel, House
Retreat, Clerke
well; tower a
spire, St. George
Church, Bickley
and Martin's Ban
Bromley.

Mr. Newto
while modest a
unassuming to
fault, is neverth
less a charmin
conversationis
possessing a keen
incisive wit, whic
he more often tha
not turns again
himself, as wh
should sa
modestly, wit
Shakespeare, "Fo
I will chide n
breather but my
self, 'gainst whom
knew most faults
Had he chosen
adopt the career
a man of letters in
stead of that of a
architect, he woul
have achieve
equal eminence
for he wields
clever pen, and ha
done good servic
on the literary sid
of the professio
which has with ac
clamation placed him at its head as President of th
R.I.B.A., a position which he will certainly adorn an
dignify. He has found too little leisure, however, fo
the exercise of his authentic literary gifts, whic
include an uncommonly graceful style and an acutel
critical perceptivity—and most of his writing has bee
of the nature of "fugitive pieces" for the periodicals
but he has published at least two volumes—"A Boo
of Houses" and "A Book of Country Houses."

His genial presence, shrewd perception, ready wi
and tactful courtesy, will be turned to excellent accoun
in overcoming the peculiar difficulties that beset
critical period in the history of the Institute.

CORRESPONDENCE.

Metropolitan Water Board Offices Competition.

the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—I wish to remove any misunderstanding that ly arise with regard to the statement in your review the above, that the drawings were placed in the order precedence published by you in your issue of the th inst. On receipt of the plans they were numbered the ordinary way, and beyond the fact that No. 1 ppened to be the design of Mr. Austen Hall, no empt was made to place the others in any order of rit.

E. GUY DAWBER.

THE PLATES.

HIS week's issue contains a Plate showing a famous work of Von Klenze, another an interesting example of current architecture, a third a pair decorous, curiously appealing pair of late Georgian ouses; the remainder being worthy examples of the ies in which they occur. The first three, and the st important, are given in their order.

Monumental Architecture. XXII.—The Propylæa tes, Munich. Von Klenze, Architect. The work of n Klenze is dealt with by Mr. Edwards in this issue. e Propylæa Gates, at the end of the Königs-Platz, usually considered his masterpiece; the building s completed in 1863. The sculpture on the centrece and flanking pylons represents scenes from the eek War of Independence.

Current Architecture. LXVIII.—New Premises the Bosch-Magneto Co., Ltd., Tottenham Court ad, London. Hobden and Porri, Architects. At sent about half of the fine industrial building shown the perspective is completed. It is a dominating ture of the busy thoroughfare in which it stands, l singularly expressive of the special purpose which erves. The total frontage is 190 ft., and the building s begun in May of last year, and completed by cember, the contractors being Messrs. W. J. Fryer l Co. The materials of construction are Portland ne and broken brick concrete, which renders the ucture fireproof. It is steam-heated throughout, l an ingenious, yet simple, system of ventilation has en introduced. The building is fitted with Eubeolith od floors.

Small Houses of the Late Georgian Period. XIII. Pair of Houses, Quarry Street, Guildford. Last ek's plate showed a treatment for linking the two rs of semi-detached houses under a portico. This ek's plate gives another solution of the same blem, where the doors finish almost flush with the ckwork. The design of the building expresses the racter of the county town, and the absence of the ecourt railing, which almost inevitably forms an unct to similar types of house in London and the ge cities, emphasises the difference between the plicity of the rural and the suspiciousness of the an citizen.

We publish No. 16 of our series of *Cottingham's signs for Ironwork: Greek, Roman, and Etruscan naments for Borders, Friezes, Pilasters, Capitals,*

Our *Students' Drawing: Design for a Monumental eplace*, by D. C. L. Derry, was one of those proved at the March Examination at the R.I.B.A. Derry is a student at the Architectural Association's School.

Stage 2 of our *Chart of Town Planning Procedure Owners' Schemes, to be Adopted by Local Authori-*, forms our sixth plate, and our *Working Drawing* y be studied in connection with the perspective of *New Premises for the Bosch-Magneto Co., Ltd., Tottenham Court Road, Hobden and Porri, Architects*, to which allusion has already been made. A plan is given on p. 423.

BUILDING DISPUTES: AN ARCHITECT'S OPINIONS.

IN the course of an interview with a representative of this Journal Mr. C. H. B. Quennell, F.R.I.B.A., expressed some interesting opinions with respect not only to the present dispute, but to the condition of the building industry generally. Mr. Quennell could see no possibility of the employment of direct labour being generally adopted. "The contractor," he said, "is indispensable under modern methods of building construction. You must have somebody at the head of affairs who can tell you more or less accurately what your building is going to cost; and there must be some directly responsible person who can be tackled in the event of anything going wrong. Both these functions are fulfilled by the general contractor, but it is difficult to see how they can possibly be met if direct labour is employed."

Turning to other aspects of the question, Mr. Quennell said we had to realise that the conditions under which the men worked were by no means satisfactory, and until those conditions, which were at the root of the trouble, were altered, we should continue to have industrial unrest. "A workman," he said, "has no guarantee of constant employment, and he is liable to be discharged from a job at a moment's notice. This is undoubtedly the cause of much unsatisfactory work. If you want good work you must have a contented man who can take a real interest in his work and do it with a light heart. The best way to achieve this end is, in my opinion, to introduce the co-operative principle, which has been adopted, apparently with success, by a large number of commercial undertakings. When a man knows that he has some security of tenure and is working for himself as well as his employer, he is stimulated to do the utmost that is in him.

"One of the prime causes of labour unrest," continued Mr. Quennell, "is the increasing employment of machinery. A man who simply has to watch a machine or periodically move a handle cannot be expected to take an interest in his work; it is so absolutely soul-deadening. He may not even be dissatisfied with his money, but still he will strike, and the reason is that both brain and hand lack proper employment. We of the building trade do not suffer in this respect so much as other trades, but that we do suffer considerably cannot be disputed. Before I began my architectural career I went through the shops and worked with the men and got to know their outlook. They were almost invariably very decent fellows, who took a pride in their work. But now, not only has a great change come about in the methods of production, but the relation of master and man has completely altered. The old type of master builder has nearly disappeared, and his place has been taken by the man of finance, who knows nothing of building and is merely intent on creating a big dividend. Architects themselves even feel the difference. Probably they never see the general contractor, much less the subcontractors, though they will see a good deal of an alert young man who is constantly about on the chance of being able to find an 'extra.'" "I should not be at all surprised," continued Mr. Quennell, "if we of the South have to adopt the method of the North; that is to say, employ the several trades direct instead of through a general contractor. This system possesses many advantages, and ensures satisfaction by the intimacy which is possible between the architect and the man who actually does the work."

MODERN ARCHITECTS:—IV. LEO VON KLENZE.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

LEO VON KLENZE was born at Hildesheim in 1784. He was the first German architect to adopt the Classic manner of building. In this case, as usual, the architectural revival was heralded by a literary movement, for Winckelmann, Lessing, and Goethe had already directed the attention of their countrymen to the splendours of antiquity. This movement was not the work of a scholastic coterie, but was national in character. While Winckelmann and Lessing, by their great learning and critical powers, did much to spread the light, it was from Goethe that the real strength of the impulse was derived.

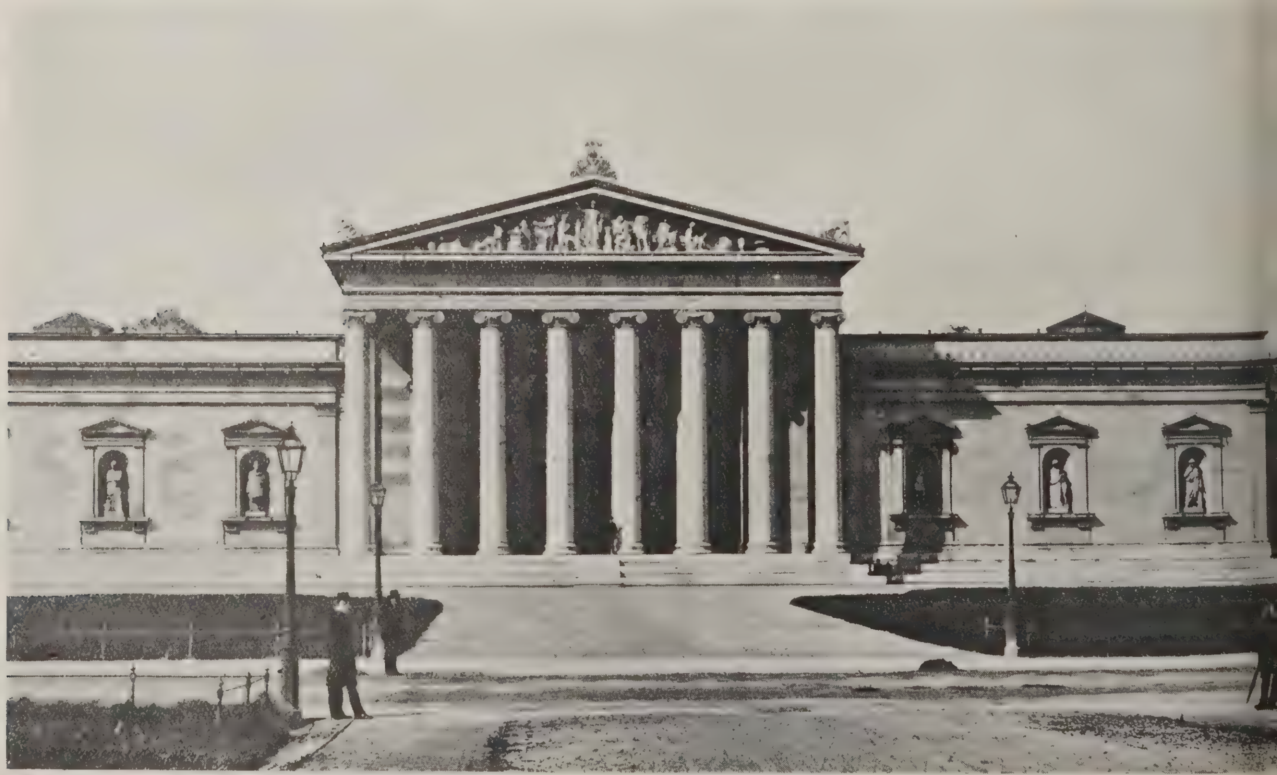
Although Goethe became thoroughly saturated in French culture he sturdily refused to become Frenchified, but directed his activities to the foundation of a literary school that would be entirely German in character. Having established his right to be considered a true son of Germany by doing so much to quicken the national consciousness he was able to exert a dominating influence in his own land, and when in middle age he repudiated the Romantic notions of his youth and adopted the standard of Classicism, he carried most of his countrymen with him. As he had shown himself so well able to express and to interpret the Gothic temperament, his later admiration of the genius of the Greeks appeared the more significant. He pondered long and reverently over mediæval art, but yet he tells us that his enthusiasm for it shrivelled up at the first sight of an acanthus leaf. At the period at which Leo von Klenze arrived antiquity had already exerted its spell.

Before attempting to form an estimate of the work of Von Klenze, it may be well to give a few details of his life and a list of the chief buildings which he designed. He began his artistic career by studying at the University of Berlin and also at the Academy of Architecture, at which institution he was a contemporary of Schinkel. In 1803 he determine devote his whole time to the study of art, and wer Paris, where he became the pupil of Durand Percier at the Polytechnic; he also took lesson painting from Bourgeois. In 1808, after travellin England and Italy, he became chief architect to Jerome of Westphalia. Six years later he was in duced to the Crown Prince of Bavaria and was ca to Munich, where he built the Sculpture Gallery. 1819 he was made architect-in-chief and advise the Ministry with regard to all matters relating to fine arts.

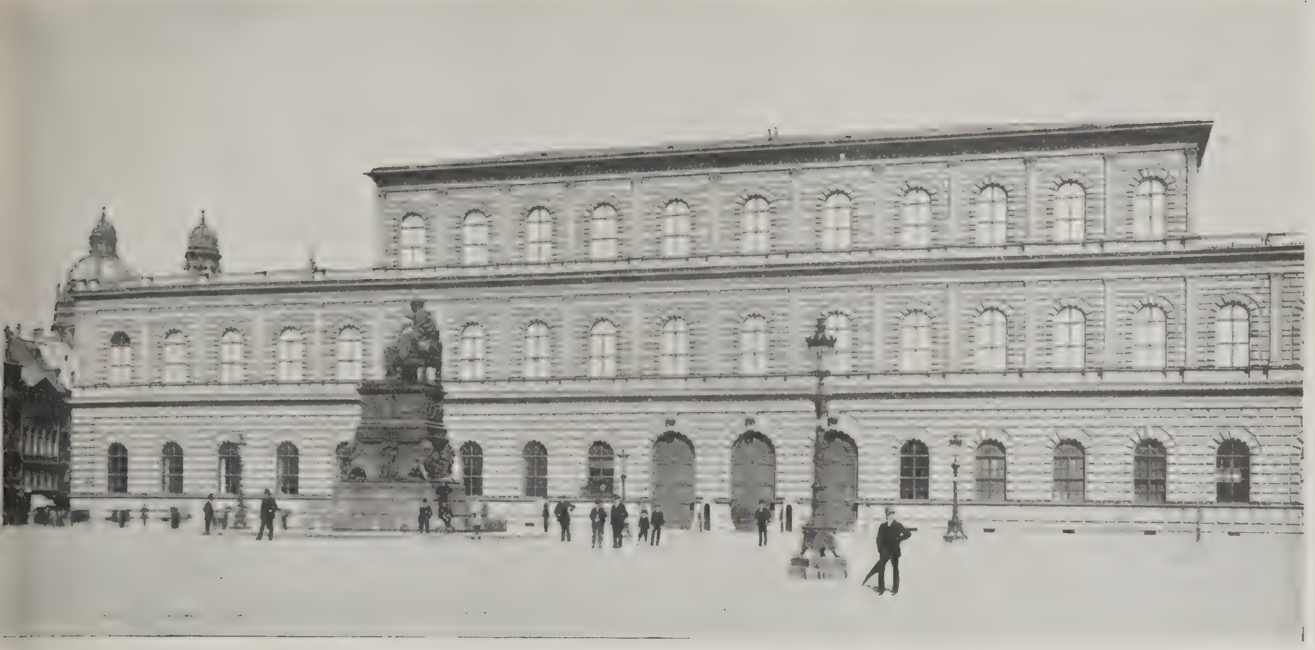
Von Klenze then accompanied the King of Bav to Greece, where he remained ten years. This w most important period of his life, for his philosoph art was then matured, and he cultivated the pure Gr style by which he was afterwards distinguished. L all architects of vigorous mind, Von Klenze was f of making experiments, and in the course of his ca he designed buildings in every conceivable st many of these schemes, however, were conceived fo own instruction and were never intended to executed. But the more he experimented the m convinced he grew that Greek art must be the foun tion of subsequent development. His Gothic Romanesque churches, therefore, must not be c sidered as his most characteristic work, and his fa rests upon such masterpieces as the Propylæa G at Munich, the Ministry for War in the same city, the Imperial Museum at St. Petersburg.

In 1834 Von Klenze returned to Munich to direc planning and restoration. In 1839 he went to Rus where, in the course of the next eleven years, he b the Hermitage and Isaaks-Kathedral, for which pose he visited St. Petersburg no fewer than se times.

He also designed a palace at Leuchtenberg



SCULPTURE GALLERY, MUNICH. VON KLENZE, ARCHITECT.



MINISTRY FOR WAR, MUNICH. VON KLENZE, ARCHITECT.

ace for his Highness the Duke Maximilian von yern at Birkenfeld and the Constitutions- nument at Gaybach-in-Franken. This latter is an uisite column which in its general contour embles Wren's Monument on Fish Street Hill.

t Munich Von Klenze built, besides the Ministry for r, Sculpture Gallery, and Propylæa Gates, which e already been mentioned, the theatre, the King's ace, and the Picture Gallery. The latter is in the le of Bramante. He also designed All Saints' hedral in the "Italian-Roman" style. This manesque structure can hardly be described as a cess. Its façade combines crudeness of composi- n with much precocity of detail, and the fine ashlar ch forms the surface only emphasises these defects, we are even denied the relief that interesting ture sometimes affords. There is a machicolated le whose coping is crowned with a heavy stone ed ornament; while the water-pipes assume the e of thin, elongated Corinthian columns; they have elation whatsoever with the rest of the façades. To petuate the most beautiful forms of the past and ecreate them as elements of a single cosmopolitan e is the task to which every architect who wishes reat of his subject in a logical manner is necessarily mitted, but this desirable end can never be accom- hed by merely borrowing features, such as rose dows and machicolated gables, and plastering them Greek detail. Not only must the range of such il be vastly extended before such a course is sible, but the whole problem of composition must reviewed afresh. The haphazard fenestration of Saints' Cathedral would appear to show that Von nze attempted to bring about a synthesis of archi- ural forms by means of ornament alone, and that ailed to establish any clear principles of composi- .

e achieved his greatest successes when he ned to be conservative and to make use of well- wn motifs. The sculpture gallery, illustrated here, distinguished by a noble octastyle portico. ntion may be directed to the skilful arrangement he steps. The wings are raised upon two steps ead of the three that are in front of the portico. base mouldings of the columns are carried round building as in the Erectheion. The Ministry for has many points of interest. Its fine scale is most impressive, while the orderly repetition of its parts gives it a note of dignity. This is a very bold design, because there has been adopted a manner of composition which is attended with great danger. The façade is all on one plane, and yet the centre part is a storey higher than the sides. One naturally asks that the two lower storeys should in some degree prepare one for the existence of the raised portion. If this latter had been carried down to the ground and emphasised by a projection of only a few inches the façade as a whole would then have taken cognisance of its central feature. But then the effect of breadth would have been sacrificed.

In this instance one must regard the three large doorways as sufficient justification for the increased height of the building above them. The second and third storeys are brought into a more intimate relation to one another by means of the happy device of making the balustrade change its character and become a piece of solid wall surface as soon as it reaches the extremities of the attic.

The Propylæa Gates, here illustrated in a Plate, are generally considered to be Von Klenze's masterpiece. This was built in 1863, the year before he died. The outline is simple and effective, and there is the utmost refinement of detail. The doorways under each tower are exquisite, and the slightly tapering piers, which become flush with the wall at their summits, are an unusual element. Yet it is possible to contend that the building is open to criticism. It appears to consist of three complete wholes, each of which would be a perfect work of art by itself. It is thus a trinity rather than a unity.

[In the next issue of this Journal there will be a review of some of Von Klenze's other buildings, and an analysis of his methods of interior decoration. There will also appear a translation of some of his apothegms concerning architecture. As he had pronounced opinions and expressed them with great vigour this translation may be of interest to readers. It is fortunate that so many of the busiest architects have found time to set down their ideas of the principles and practice of their art; and still more fortunate when their mature thoughts are crystallised into apothegms.]

CONCRETE AND STEEL SECTION.

(MONTHLY.)

CONCRETE: REINFORCED AND IN MASS—SOME BASIC PRINCIPLES

SPECIALLY CONTRIBUTED BY JOHN A. DAVENPORT, M.Sc., Assoc.M.Inst.C.E., M.C.I.

Even when one is thoroughly familiar with a rather complex subject, it is nevertheless useful and interesting to re-examine occasional groundwork; and it may be further assumed that there are many for whom the basic considerations set forth in the following article will possess a more positive value.

CONCRETE may be defined as follows: "An artificial stone made by mixing together broken stone, sand, and Portland cement in suitable proportions, with water, the liquid mixture being run into moulds and allowed to set hard." The materials used, and the way in which they are proportioned and mixed, have a very great effect upon the concrete produced, which may be as strong as the stone which forms part of it, or very much weaker.

Considering concrete as an artificial stone, we can, working by comparison from a solid block of stone, through various blocks, to a block of concrete, show that concrete, correctly made, can be as strong as a single block of the same stone as that used in mixing the concrete. We will consider different cubes of, say, 12-in. side, and compare the compressive strengths and anything which affects the strength. Let us first consider a cube of any good non-porous building stone, which we may regard as our standard block. This is shown in Fig. 1, and it will be noticed that along any section AB, contact takes place at every point in the section. Thus the area contributing to the compressive strength of the block will be 144 sq. in., and the strength of the block, whatever it may be, we may regard as the standard strength.

Let us next consider the strength of a cube built up of, say, 3-in. cubes, all of which have their surfaces accurately faced, and which are placed together without any spaces existing between adjacent cubes. This cube is shown in Fig. 2, and it will be seen that along any section CD, whether coinciding with the joints or not, contact will take place at all points in the section. There is therefore an area of 144 sq. in. resisting compression, and the cube will have the standard strength. It might be thought that the addition of cement joints would increase the strength of the built-up cube, but this is not so—provided, as assumed, all the small cubes are accurately faced. Concrete is, or should be, only subjected to compressive forces, and in making our comparison we must only consider the compressive strength of the cube, and this would not be increased by cement joints.

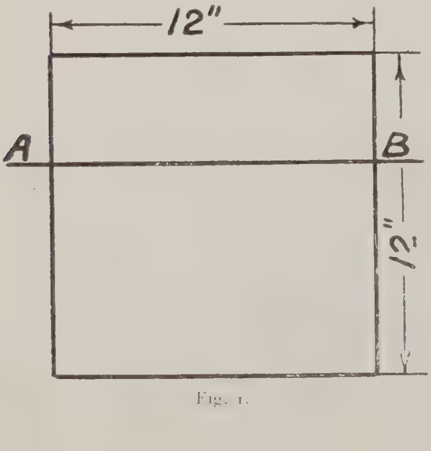


Fig. 1.

The next cube, shown in Fig. 3, is built up of 3-in. cubes with undressed faces. As the surfaces of the small cubes are not accurately faced, contact will not take place at all points and there will exist hollow spaces as shown in black in the figure. Thus, along any section EF, not running through the horizontal joints, the area resisting compression will be less than 144 sq. in., owing to the spaces in the vertical joints. If we consider a section GH, running through one of the horizontal joints, the area will, very probably, be much less than the area resisting compression at the section EF. Thus, the strength of such a cube, built up without mortar joints, will be less than the standard strength. The strength of the cube may, however, be increased up to the standard strength by filling the hollow spaces with a suitable mortar composed of sand and Portland cement.

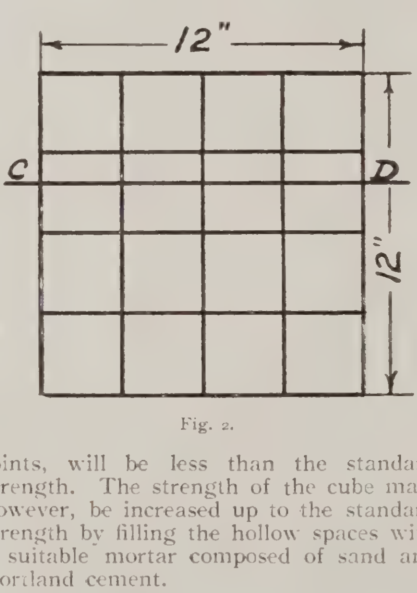


Fig. 2.

The last cube we will consider is one built up of irregularly broken stone, similar to that used in the making of concrete, the pieces being held together with a mortar which, we will assume, does not contribute to the compressive strength. This cube is shown in Fig. 4, with the spaces filled with mortar blacked in. These are shown of comparatively large size for clearer illustration. Any section JK, the total area of which is 144 sq. in., will be made up of a certain area of contact of stone on stone, contributing to the compressive strength, and an area of mortar joint which does not contribute to the compressive strength. The strength of the cube will therefore be less, probably very much less, than the standard strength. The strength of the cube may, however, be increased up to the standard strength by filling up the spaces which exist between the broken stone with a mortar which contributes, equally with the stone, to the compressive strength, and this can be done, as in the preceding case, by using a suitable mortar composed of
sand and Portland cement. It is t
fore possible to make a concrete w
shall have a strength equal to the sto
the block of which it is made.

It has been seen that in order to pro
this good quality concrete a good st
mortar is necessary, and it will be w
while considering the nature of this m
a little more particularly. It will be
that the best method of filling the sp
which exist between the broken sto
shown in black in Fig. 4—will be to i
pieces of the same kind of stone corr
made to fit the spaces. The high co
such a method renders it altogether un
able for concrete, but a consideration
suggests a way out of the difficult
follows:

One of the spaces between the ston
shown enlarged in Fig. 5, and this is
filled with a material as strong as the
rounding stone. We may partly fill
space with a stone, shaded vertically,
leaving three triangular spaces at
corners. These can then be partly f
as shown, with the smaller stones sh
horizontally. This leaves seven s
triangular spaces, which may a
be partly filled with smaller stone,
if too small for stone, filled with sand.
this way the whole of the space, with
exception of very small spaces, wil
filled with material (stone and s
which is as strong as the stone itself.
very small spaces which ultimately re
are subsequently filled with cement.
concrete, as shown in Fig. 5, will the
composed of three different sizes of
—numbered 1, 2, and 3—sand, and cen
and such a concrete, made with the
materials and reasonable care, is the
obtainable, and equal in strength to
solid stone. This "grading" of
aggregate or broken stone may, at
sight, appear a difficult process, but,
everything else, "it is very easy when
know how, and go about it in the
way." By paying attention to it
economy can be effected, as evidence
the fact that of two concrete cubes

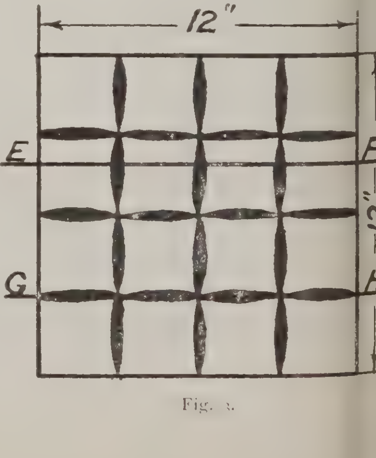


Fig. 3

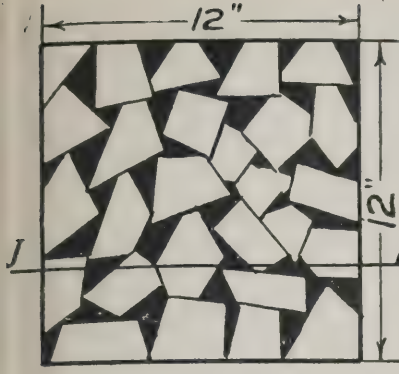


Fig. 4.

om the same materials, the one having ıe aggregate graded and the other having ıe aggregate as delivered, the former will much stronger than the latter. Grading aggregate should therefore be one of ıe most important considerations in the ıaking of concrete, but the present pracce is, unfortunately, not to give it much tention.

The size of the aggregate will vary with ıe work for which the concrete is reıired. Thus, for mass concrete, which usually laid in thicknesses from 2 ft. pwards, the aggregate will be small ıough if it pass through a 3-in. ring, and ı addition to this large stones, which may several feet in diameter, called plums," are put in the mass at regular ıtervals. On the other hand, concrete ır use with reinforcement should be made ith aggregate which will pass through a -in. or $\frac{3}{4}$-in. ring, in order that it may be ısily placed between the metal bars. The ggregate should be graded, as already ated, so that certain proportions will pass ırough rings which are smaller than the ıaximum sizes already quoted. In all ıses any aggregate passing through a -in. ring, or less, is reckoned as sand, and ıust therefore be taken into account when oportioning the sand.

So far we have looked upon the cement a material used to fill the very small ɔaces which exist in the mixture of sand ıd aggregate, but it has another imporınt function to perform, and one from hich it takes its name.

If we subjected the cube shown in Fig. 4 compression, the greatest source of eakness lies in the tendency of the stones bulge out laterally under pressure. To crease the strength we must therefore event this bulging, and this may be done either of two ways. First, it may be evented by introducing an external force ɔlding the stones in place, such force ing provided by a casing made to fit ɔund the cube. Secondly, it may be prented by applying internal forces which ɔld the stones in place, such forces being ovided by a cement which makes the ones adhere to one another. The second ethod is adopted in making concrete, ıd we therefore see that the cement has vo functions to perform, viz.:

1. To fill the very small spaces which ist in the mixture of sand and stone.

2. To cement firmly together all the ırticles of sand and stone.

In order to fulfil these requirements the ment must be very finely ground, and it ust also possess strong adhesive prorties. Fortunately, the Portland cements present manufactured in this country lfil these requirements admirably, but the e of good cement is of no avail if the nd and stone be not also in a suitable ate. If two pieces of stone or sand vered with clay, dust, or other material cemented together and then subjected to tension it will be found that they pull apart very easily, owing to the fact that the cement adheres to the coatings and not the stones. The only adhesion is that which exists between the stone and coating, and this is very small. Further, the sand and stone may have mixed with them materials which chemically affect the cement and thereby injuriously affect its good qualities. Thus, it is necessary to see that the sand and stone not only are of the right quality and size, but also that they contain no clay, dust, or anything else which would adversely affect the setting and strength of the resulting concrete.

We may now say that for good strong concrete the following points must have attention:

(1) The aggregate must be hard and free from pores. (2) Free from coatings of clay, dust, or anything which would injuriously affect the setting and strength of the cement. (For reinforced concrete the aggregate must contain nothing which would injure the steel.) (3) The aggregate must be broken to the right size and graded. (4) The sand must be hard. (5) The sand must be free from coatings, etc., as in (2). (6) The sand must be of the right size and graded. (7) The cement must be good quality Portland cement.

Having now considered the important points in the making of concrete, we may turn our attention to the advantages possessed by the material.

Taking first mass concrete, we have seen that it can be made as strong as stone and, so far as strength goes, it is therefore quite as good as stone. Another important advantage in favour of concrete is its monolithic structure, which enables construction to be carried out without the necessity of introducing special ties and the like. The labour involved in handling concrete is of the cheapest possible kind, and as no heavy weights are to be lifted no heavy lifting machinery is required. It is true that mixing machines are required, but the cost of these is very small when compared with the cost of gantries, crane tracks, cranes, etc., which are necessary for heavy masonry work. From the point of view of cost of materials concrete has a great advantage over masonry, as the materials for 1 cub. yd. of concrete cost 16s., compared with 43s. to 63s. for 1 cub. yd. of stone. Another thing in favour of concrete is rapidity of construction, concrete construction requiring about one-half the time required for masonry construction. Its strength increases with age, a most important point, and it possesses such good fire-resisting properties that it is often used to protect steel construction from fire.

Turning now to reinforced concrete, which should be compared with steel construction and masonry construction, with which it successfully competes, we must first note that, like mass concrete, it possesses all the advantages relating to strength, monolithic structure, cheap handling, increase of strength with age, cost, rapidity of construction, and fire resistance. In addition, reinforced concrete allows much greater floor space than do masonry and brick construction, as curtain walls need not have a greater thickness than 5 in. This reduction in the sizes of wall, etc., means a most important advantage in the reduction of the dead weight of the structure, thereby reducing foundations, and the like. Then for marine work, such as piles, reinforced concrete has the advantage that it is not affected by rust, marine growths, etc.

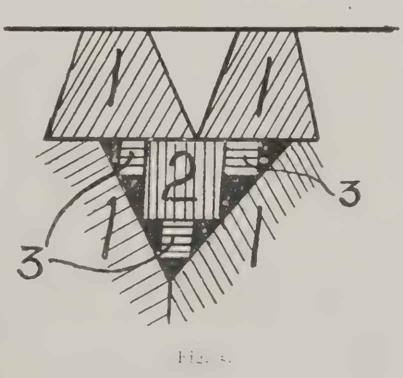


Fig. 5.

An important advantage in all cases is that there are no upkeep charges.

Regarding the fire resistance of reinforced concrete, it has already been noted that concrete is often used to protect steel, and a comparison of reinforced concrete and concrete-protected steel will therefore not be out of place.

Reinforced concrete consists of a mass of concrete with steel bars embedded therein, and as the steel and concrete both contribute to the strength at any section an economical construction results. The steel only forms a very small percentage of the total, and being arranged more or less as a network of bars it tends to hold the concrete mass together when subjected to heat and water. On the other hand, concrete-protected steel consists of a large percentage of metal core and a smaller percentage of concrete, in the form of a thin coating which does not contribute to the strength. When such construction is subjected to heat and water there is some risk of the protective coating flaking off, and if that happens, and the fire continues, the steel is not much better off than it would have been without a protective coating.

The disadvantages urged against concrete (chiefly reinforced) are as follows:

(1) The monotonous grey colour which it possesses. (2) The difficulty of architectural treatment. (3) Its unsuitability to alterations. (4) It requires careful supervision for good work. (5) It is a more or less unknown quantity.

The first disadvantage may be, and is often, removed by using surface finishes which contain special pigments, and this need not be a very costly job.

The second disadvantage may be overcome by increasing the cost of the timber work, and good examples of the successful architectural treatment of reinforced concrete are afforded by the following buildings which are built entirely of reinforced concrete: Government Buildings, Jamaica; Lion Chambers, Glasgow; Bridge, Crewe Park.

The difficulty of alteration is, after all, only a minor point, and ceases to be a difficulty when tackled properly.

The necessity for strict supervision should not be regarded as a disadvantage, as all work is better for good supervision; still, in the case of reinforced concrete it is the labour which requires such close attention for good work. When all builders are dealing with reinforced concrete construction this strict supervision will not be necessary, as such construction is really not difficult. The last disadvantage relating to its being an unknown quantity is rapidly passing away, as evidenced by the fact that the R.I.B.A. have already issued their second report dealing with reinforced concrete, and the L.C.C. have drafted revised regulations which will become operative in the very near future.

Having now discussed the nature of concrete and its advantages and disadvantages, as compared with masonry and steel-work, we are in a position to understand why it should be used to such an extent that the present time is called the

"Concrete Age." Put briefly, concrete is as efficient and is more economical than masonry and steel, and the Concrete Age will very probably continue until the time when the chemists produce a material which can be cast like concrete and which also possesses great tensile and compressive strength.

REINFORCED CONCRETE IN THE BRITISH MUSEUM EXTENSIONS.

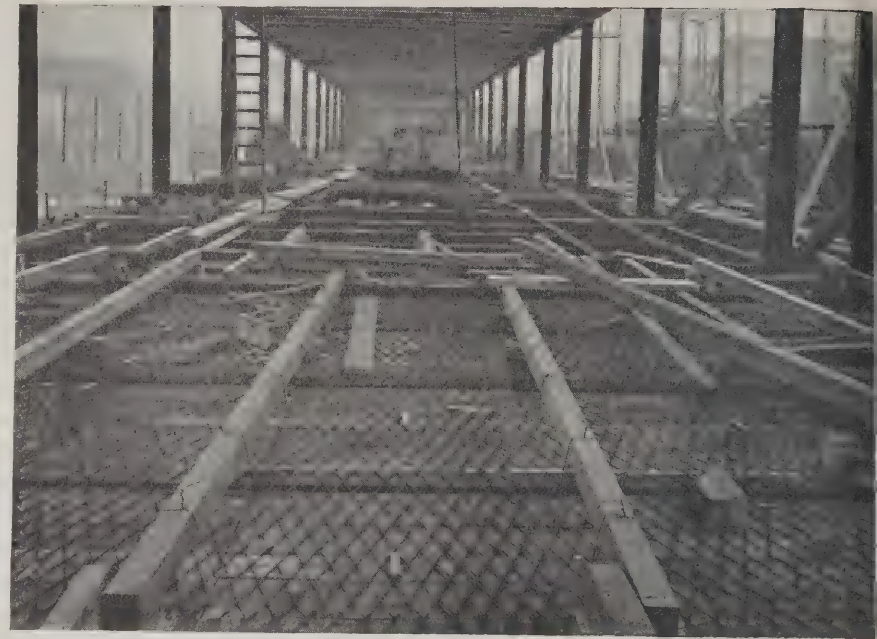
A detail of the elevation of the British Museum Extension formed one of the plates in our issue of May 13, and a fully-illustrated description of the extension appears in the current (June) issue of the "Architectural Review." In the internal construction of the new galleries reinforced concrete has been used to a very considerable extent.

The work comprises the King Edward VII. Galleries facing Montague Place, and the reconstructed North Library forming a connecting block between the new and the old buildings. The new wing forms an extension to the north side of the Museum, and is the first portion of an extensive scheme embracing the south, east, and west sides.

The new building is approximately 320 ft. long by 50 ft. wide, and 80 ft. high from street level to the top of the parapet wall.

There are four suspended reinforced concrete floors: Sub-ground floor at entrance level from Montague Place; ground floor; mezzanine floor; and top gallery floor with roof over. At their respective levels the floors are supported by built-up steel stanchions, set at 16 ft. 8 in. centres longitudinally, on which rest longitudinal R.S.J. mains carrying R.S.J. secondaries at 4 ft. 2 in. centres. The centre longitudinal bay is 25 ft. 6 in. wide, the two side longitudinal bays varying in width as the main walls diminish in thickness towards the roof.

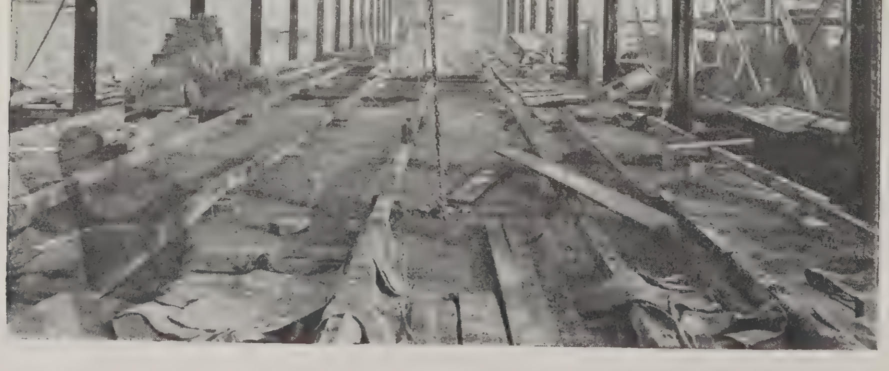
The steel stanchions are encased in 9-in. brickwork coated with lime and hair plaster finished in lime putty; the R.S.J. mains and secondaries are encased in concrete, splayed down from the flooring to the bottom flanges.



THE BRITISH MUSEUM EXTENSION: REINFORCEMENT IN FLOOR OF MAIN GALLERY.

The soffit of the flooring is half an inch below the top flanges of the secondaries, and as the reinforcement is laid on top of the secondaries it is thus embedded half an inch from the underside of the concrete flooring. All the floors are 4 in. thick, and they are reinforced throughout with No. 8, 3-in. Diamond Mesh Expanded Steel.

The ceilings to the sub-ground and the mezzanine floors are flat and plain, and are of Expanded Metal lathing and plaster, suspended beneath the R.S.J.'s in the flooring by means of flat mild steel bars spaced 12 in. apart, hung on edge in mild steel hangers carried by mild steel clips fixed to the bottom flanges of the R.S.J.'s. In the ground floor gallery, and in the north library, the ceilings are suspended in a similar way, but they are ornamented with mock beams, sunk panels, cornices, etc. The metal grounds of the mock
beams, etc., consist of flat mild steel
cradles, bent to the necessary shape
fixed 3 ft. apart to the R.S.J.'s in the fl
ing, and straight round mild steel rods,
12 in. apart along the cradles and wire
them to act as stiffeners for the Expan
Metal lathing, which is wired to the
and around the shaped cradles. The
struction of the mock beams in the
gallery is shown on p. 431 in three sta
of progress—first, with the Expan
Metal reinforcement in position, then
plastered over, and finally in the finis
state.



THE BRITISH MUSEUM EXTENSION: FLOOR OF MAIN GALLERY AFTER CONCRETING.

The Expanded Metal lathing and pla
ceiling to the top gallery is suspended
means of clips, hangers, bars, etc., fr
the steel roof trusses above. It is cur
and ornamented; and as prints and dr
ings are to be exhibited in this gallery,
ceiling is designed for and fitted with ro
lights

The main staircase with its landings i
reinforced concrete framed in rolled st
sections.

The treads and risers were construc
in situ in concrete, reinforced with 3
Diamond Mesh Expanded Steel embed
about half an inch from the soffit, wh
is flush and finished in Keene's ceme
The balustrade also is formed in reinfor
concrete, but marble facings are fixed
the treads and risers and on the bal
trade. The balustrade to the circu
light well on the ground floor gallery
also of reinforced concrete faced w
marble.

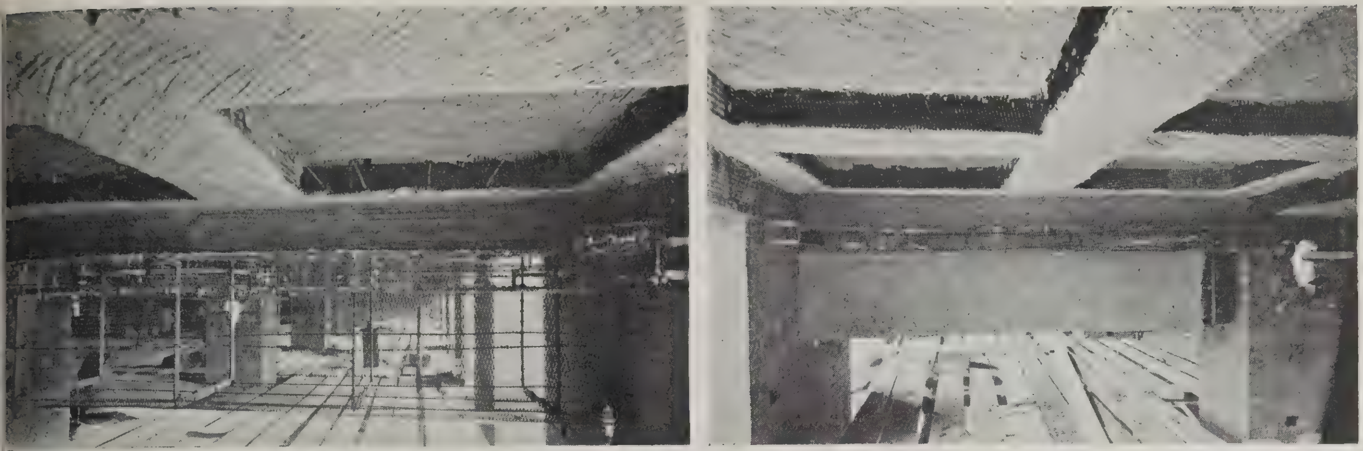
The four steel columns in the stairc
and the six in the north library are ma
of steel angles, riveted together with
bar rings, filled in solid with and encas
in reinforced concrete.

The mock columns in the galleries
formed of small steel angles, riveted
gether with flat bar rings, with expand
metal lathing wired to them and cover
with sand and cement 3 to 1, 3 in. thick.

The built-up steel trusses carrying
roofing and the suspended ceiling to
top gallery are encased in reinforced co
crete.

At the roof level on the Montague Pla
elevation there is a reinforced concr
parapet wall.

Over the radiators in the north windo



BRITISH MUSEUM EXTENSION: VIEWS IN MAIN GALLERY SHOWING MOCK BEAMS BEFORE AND AFTER PLASTERING.

the ground floor level, shelving was structed in sand and cement $2\frac{1}{2}$ to 1, n. thick, reinforced near each face and ered in marble $\frac{3}{4}$ in. in thickness.

he concrete throughout was composed $3\frac{1}{2}$ parts of crushed clinker, $1\frac{1}{2}$ parts fine clinker, and 1 part of Portland nent; the plaster throughout on panded Metal lathing was composed of ee parts of lime and hair mortar to one t of Portland cement, finished in ene's cement. The concrete is nowhere s than 2 in. thick and the plaster no- ere less than $\frac{3}{4}$ in. thick. Clean fresh er only was used for mixing purposes.

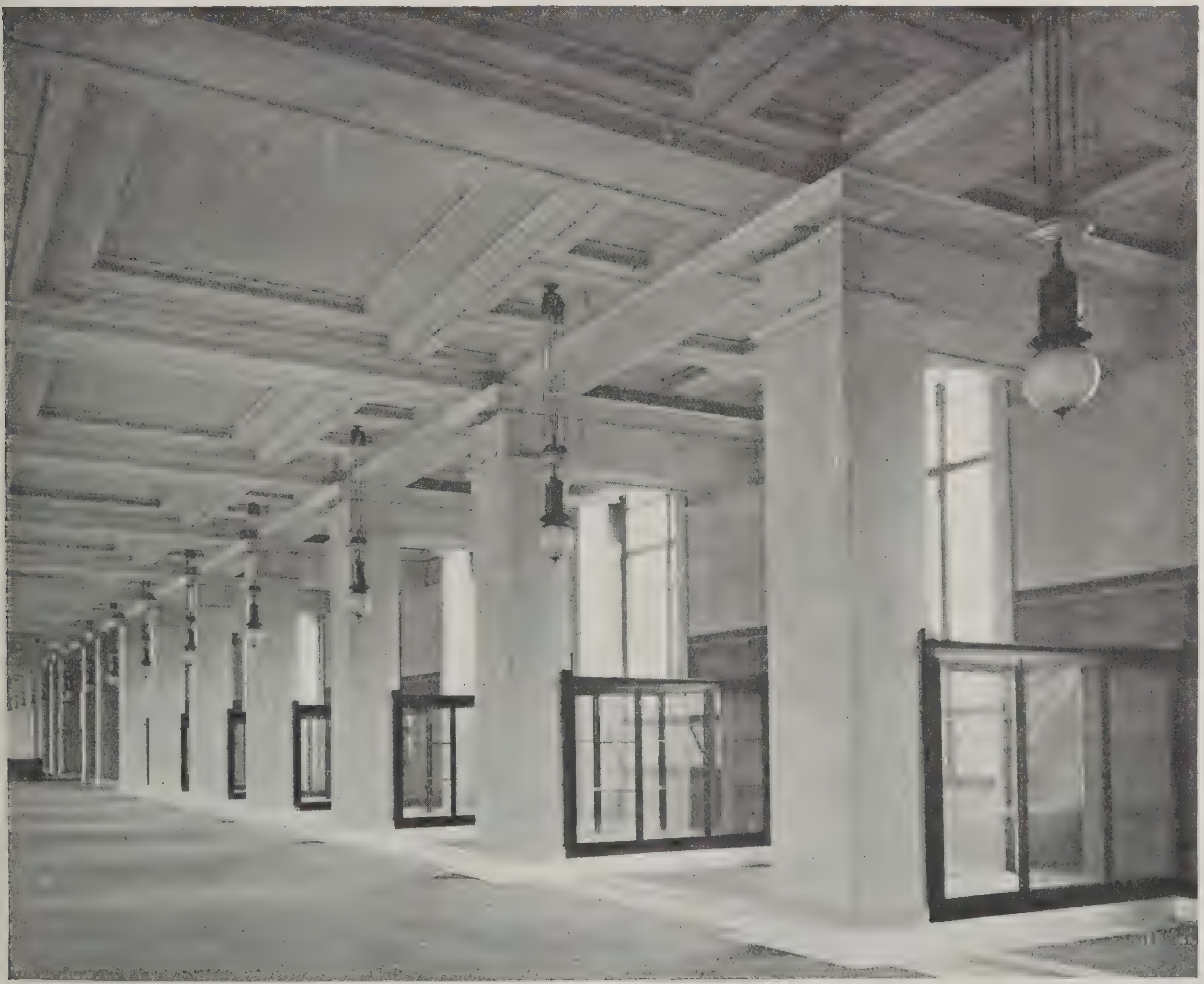
The galleries have been erected to the plans and specifications and under the supervision of the architect, Mr. John James Burnet, LL.D., A.R.S.A., F.R.I.B.A. The Expanded Steel Reinforcement for concrete work and the Expanded Metal lathing for plaster work used throughout was supplied by the Expanded Metal Co., Ltd., of London and West Hartlepool. The adaptability of this system of reinforcement to architectural design in buildings of the highest character could hardly be more convincingly demonstrated.

Messrs. W. E. Blake, Ltd., of London and Plymouth, were the general contractors.

THE CONCRETE INSTITUTE.

At the fifth annual general meeting of the Concrete Institute held at Denison House, 296, Vauxhall Bridge Road, Westminster, Mr. E. P. Wells, J.P., president, in the chair, the Institute Medal, which is awarded annually for the best paper read in the previous session, was presented to Mr. S. Bylander for his paper entitled "Steel Frame Buildings in London."

Professor Henry Adams, M.Inst.C.E., M.I.Mech.E., F.S.I., F.R.San.I., etc., was installed as President of the Concrete Institute for the ensuing two years of office.



BRITISH MUSEUM EXTENSION: VIEW IN MAIN GALLERY SHOWING PIERS AND BEAMS IN THEIR FINISHED CONDITION.

At the fourth annual dinner of the Institute, which was held in the Crown Room, Connaught Rooms, on May 28th, Professor Henry Adams, M.Inst.C.E., M.I.Mech.E., F.S.I., F.R.San.I., etc. (president), occupying the chair, Mr. Ellis Marsland, M.S.A., District Surveyor for Camberwell, President of the District Surveyors' Association, in proposing the toast of "The Concrete Institute," offered his congratulations on the fact that the Institute had in the short space of six years attained a membership exceeding 1,000. The Institute had evolved order out of chaos, had standardised and regulated the whole system of concrete work so as to make it practical and workable, and it had assisted and had taken a very large part in perfecting the formulation of the regulations to be made under the 1909 Building Act in reference to reinforced concrete construction.

Professor Henry Adams, M.Inst.C.E., M.I.Mech.E., etc., president, in replying to the toast, said that the Concrete Institute had come in on a flood tide, and its immediate success was almost phenomenal. At first the meetings were crowded, and the copies of the papers were eagerly sought after. Then, unfortunately, there was an ebb; the attendance fell off, because it was found that in concrete alone there was not sufficient scope. The Council, in considering the matter, came to the conclusion that some development was wanted, and he thought they wisely decided to admit papers on structural steelwork where no concrete was employed, or was employed in only a secondary manner. The result was that the interest in the meetings was revived and the attendance went up again with a bound. The Council then fully considered the whole position, and came to the conclusion that some amplification of the title was desirable, and added a sub-title, "An Institute for Structural Engineers, Architects, etc." Structural engineering was the one term that best expressed the variety of work of which the Institute took cognisance, but that did not mean structural steelwork alone—it included all kinds of buildings and all materials where stability was the chief aim. It excluded architecture, town-planning, railway and tramway work, sewerage work, waterworks, and mechanical engineering of all kinds. For some time past the Council had been preparing a scheme of examinations. The intention was that the graduates and associate-members should be able to obtain certificates testifying to their knowledge of the various branches that came under the domain of the structural engineer and architect. At present the examination would be entirely voluntary, but there was no doubt that the time might come when the question of making them compulsory would be considered. The policy of holding examinations had been questioned in some quarters, but an examination certificate was the best form of testimonial, and with so large a proportion of young men among their members the opportunity of obtaining a certificate he thought should be of great assistance.

Mr. H. D. Searles-Wood, F.R.I.B.A., vice-president, proposed the toast of "The Visitors," and Sir John Cockburn, K.C.M.G., M.D., late Premier of South Australia and some time Agent-General for the same colony, in replying, said he felt that, in the work the Institute was doing, not only was distinction being added to the various professions of those who were members of the Institute, but that the Institute was engaged in a great Imperial work. Without concrete nothing could have been done in Australia. Concrete construction was still in its infancy, and had a glorious future to look forward to. In the Empire there were great works of water conservation being constructed, and yet to be constructed, and for such works concrete was, as they knew, absolutely necessary.

Mr. E. Fiander Etchells proposed "The Health of the Chairman," to which the President briefly responded.

EXTRACTS FROM REPORT OF COUNCIL FOR 1913-14 SESSION.

The Concrete Institute had on May 14, 1914, 930 Members, 28 Associate-Members, 6 Associates, 54 Students, 5 Special Subscribers, and 16 Honorary Members.

Articles of Association.

At the beginning of the 1913-14 session a number of alterations were made in the Articles of Association. These alterations, in brief, extended the classification of the membership by the inclusion of classes of Associate-Members, Associates, and Graduates. No Graduates have yet been admitted pending the establishment of examinations.

Examinations in Structural Engineering.

The Improvements Committee having recommended the institution of examinations in structural engineering, the Council during the past session appointed an Examination Committee, which was subsequently, in December last, merged in a nucleus Examination Board, consisting of Professor Henry Adams, Mr. E. Fiander Etchells, Mr. W. G. Perkins, and Mr. E. P. Wells. The Examination Board has compiled a syllabus and rules for the proposed examination. It is proposed to hold the first examination next year.

The L.C.C. Regulations.

The Council and Committees have been very much occupied in the past session with technical matters. In previous reports the action of the Institute has been recorded in respect to the regulations made under the provision of Section 23 of the London County Council (General Powers) Act, 1909, with respect to the construction of buildings wholly or partly of reinforced concrete. The Institute made suggestions upon a draft which was submitted by the London County Council, and subsequently made suggestions upon the first set of regulations when issued by the London County Council. These suggestions for the amendment of the regulations were sent to the Local Government Board, and in June, 1913, the London County Council rescinded their first set of regulations and made new regulations, which were the outcome of prolonged negotiations between technical advisers of the Council and the Local Government Board. The statutory notice of the intention of the London County Council to apply to the Local Government Board for allowance was duly given to the four societies named in the Act—namely, the Royal Institute of British Architects, the Institution of Civil Engineers, the Surveyors' Institution, and the Concrete Institute. The second (and revised) regulations thus came before the Societies for consideration with a view to submitting further suggestions for amendment to the Local Government Board. It was found that as a result of the negotiations between the technical advisers of the London County Council and the Local Government Board, many drastic alterations had been made to the first set of regulations, and, as the
Building Acts Committee of the L.C
reported, "in some instances they ren
the regulations somewhat more oner
than those originally adopted by
Council." The matter is naturally one
extreme importance to the members of
Institute, not merely as affecting pract
in London, but because the regulatio
when finally approved, will probably
referred to by municipalities in promoti
regulations for their respective localiti
The Council and the Standing Committ
—*i.e.*, the Science Standing Committ
the Reinforced Concrete Practice Stan
ing Committee, the Parliamentary Co
mittee, and the Tests Standing Co
mittee have therefore given care
detailed consideration to the revised reg
lations. The Institute's suggestions as
the amendment of the second set of reg
lations were sent to the other technic
societies, and the Institute has been
formed that they have been supported
large part by the Royal Institute
British Architects and by the Surveyo
Institution. The Institute's suggestio
were finally submitted to the Lo
Government Board in December last, a
are now under consideration by the tec
nical advisers of the London Coun
Council and the Local Governme
Board.

Standard Notation.

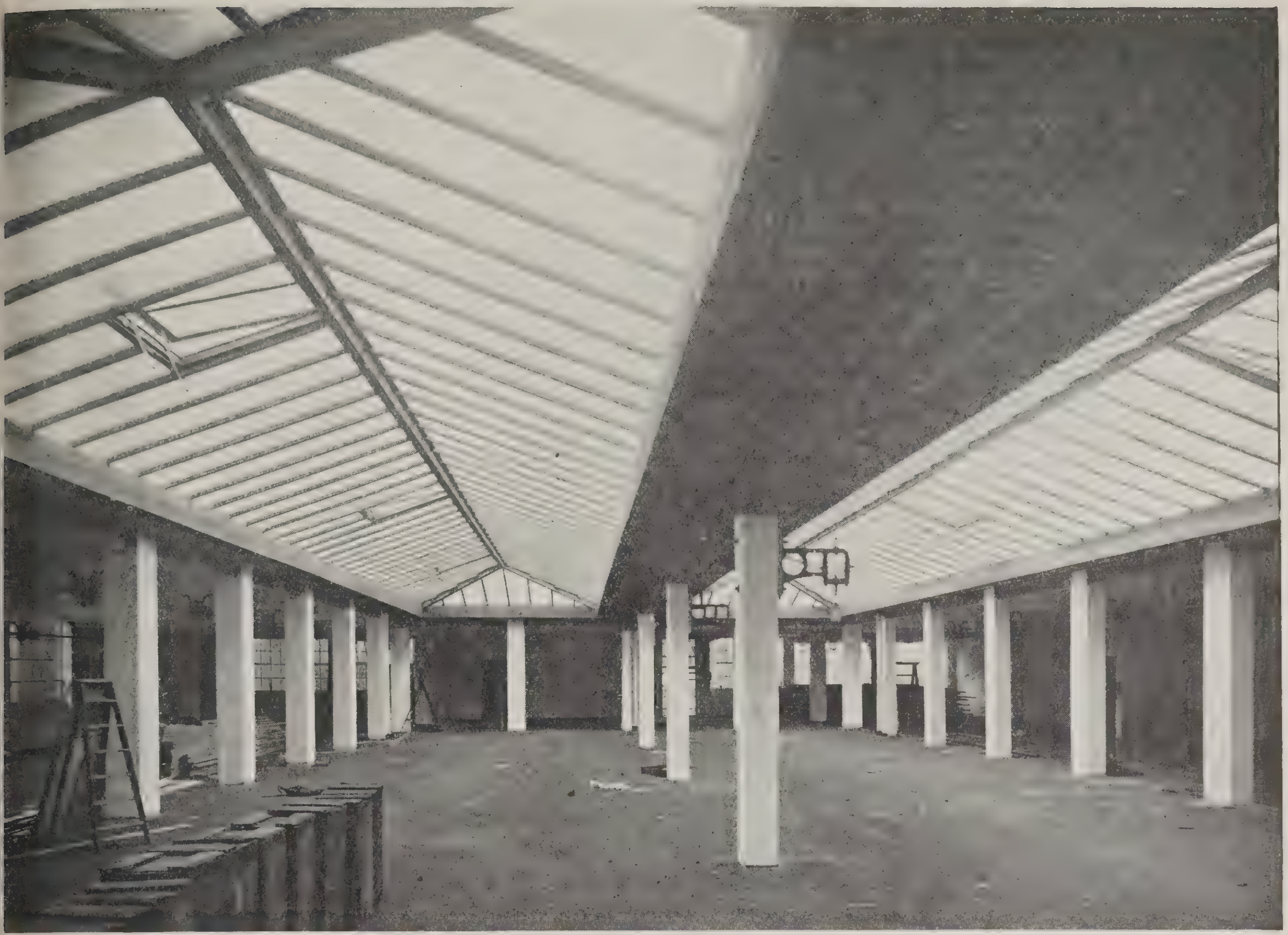
In addition to considering the L.C.
Regulations for Reinforced Concrete t
Science Standing Committee has been co
cerned with the revision of the Standa
Notation for Structural Engineering C
culations in view of the criticisms made
the general meeting when the draft repo
on the matter was submitted. The final
revised Notation will be issued shortly.
conjunction with the Reinforced Concre
Practice Standing Committee a Standa
Specification for Reinforced Concre
Work has been prepared in draft, and w
be submitted for discussion.

Standard Specification for Cement, et

The Science Standing Committee h
the following further matters under co
sideration: (1) Standardisation of join
and connections in reinforced concrete, (
advice to superintendents of reinforce
concrete work, (3) Amendment of t
standard specification for cement, (4) c
ordination of the standard specificatio
for structural steel of all kinds, (5) th
adhesion of and friction between concre
and steel, (6) reinforced concrete piles, (
the effect of sewage upon concrete, (8) th
effect of oils and fats on concrete.

A Standard Method of Measurement.

During the past session the Reinforce
Concrete Practice Standing Committee h
met, in conjunction with the other Stan
ing Committees and the Council, to co
sider the L.C.C. Regulations for Rei
forced Concrete Work. The Committe
has held joint meetings also with delegate
of the Quantity Surveyors' Association an
with members of the Concrete Institut
who are quantity surveyors by professio
Several meetings were held, as a result
which a draft report on a standard metho
of measurement for reinforced concret
was submitted for discussion at a gener
meeting. Since this meeting the repo
has been considered by the National Fede
ration of Building Trades Employers
Great Britain and Ireland and by the In
stitute of Builders, who have made sugges
tions for its amendment in certain parti
culars. Meetings will be subsequentl
convened to consider the various criti
cisms, and steps will thereafter be take
to issue a final report in due course.



ACTORY FOR MESSRS. EDWARDS AND SONS, NORWICH: VIEW SHOWING "FERRO-STONE" GLAZING IN LANTERN LIGHTS.

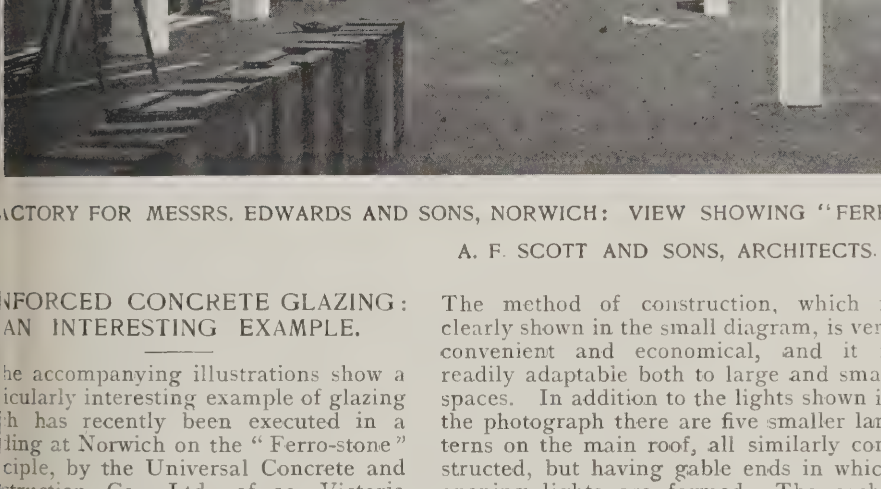
A. F. SCOTT AND SONS, ARCHITECTS.

NFORCED CONCRETE GLAZING: AN INTERESTING EXAMPLE.

he accompanying illustrations show a
icularly interesting example of glazing
h has recently been executed in a
ling at Norwich on the "Ferro-stone"
ciple, by the Universal Concrete and
struction Co., Ltd., of 20, Victoria
et, Westminster.

ach lantern light is over 80 ft. long
17 ft. wide, the glazing being erected
out either principals or ties, the glaz-
bars themselves carrying the ridge and
, which are of reinforced concrete.

The method of construction, which is clearly shown in the small diagram, is very convenient and economical, and it is readily adaptable both to large and small spaces. In addition to the lights shown in the photograph there are five smaller lanterns on the main roof, all similarly constructed, but having gable ends in which opening lights are formed. The architects for the building were Messrs. A. F. Scott and Sons, of Norwich; and the structure, which is of reinforced concrete, was carried out by Messrs. Lewis Rugg and Co., of Queen Anne's Chambers, Westminster.



SECTION OF "FERRO-STONE" GLAZING CONSTRUCTION.

THE ARCHITECT AND THE REINFORCED CONCRETE SPECIALIST.

Questions have often been raised concerning the relationship which should exist between the architect and the reinforced concrete specialist, and this subject is dealt with very fully and frankly in the first number of "Kahncrete Engineering" (a notice of which appears elsewhere in this issue), the new bi-monthly private publication which is being issued by Messrs. The Trussed Concrete Steel Co., Ltd., Caxton House, Westminster.

In this age of specialisation (the "Kahncrete Engineering" writer observes) it is only reasonable to assume that an architect acts wisely in consulting a specialist designer whenever reinforced concrete plays a part in the construction of a building. Although the architect may himself be fully competent to deal with the subject, it is natural that his many duties do not permit him to pay that close attention to the study of this particular building material which it demands, and that a certain economy must result from the employment of a firm of specialists whose engineers and draughtsmen confine their attention to this material alone. That so many architects do call in the reinforced concrete specialist when the occasion arises is evidence in favour of our contention.

We think, however, that some architects make a mistake in their method of consulting the specialist. They prepare small-scale plans and draft specifications for the work in hand and then request several firms of specialists to submit competitive schemes for the construction. We are convinced that this course of procedure is rarely calculated to secure the best results. In the first place, the specialist will not feel perfectly free to give his best advice towards securing the most suitable and economical design if he knows that he is competing, and that if his design is not successful his various suggestions will only be used by his competitors. The relationhip between the architect and the specialist should be a purely professional one, leaving the specialist at liberty to give unstintingly of his best. Secondly, when there is competition in designing, the specialist is under a great temptation to submit a meagre design in the hope that a low tender upon it will result in its adoption. Thus a premium is placed on that design which cuts everything down to the lowest conceivable minimum, thereby involving the greatest risks. Thirdly, when the various competitive designs are submitted by the specialists it is difficult for the architect to select the best design without carefully checking all the designs submitted, and this would naturally create too great a demand upon his time. Fourthly, this method of procedure is not an economical one, because the cost of preparing competitive designs which are not successful must increase the establishment charges of the specialist and must eventually be borne by the client. Fifthly, the designs of a specialist when submitted in competition cannot be prepared with the closest attention to details, and on this account various errors are apt to arise, causing undesirable contention as to improper quantities having been supplied to the contractor for tendering purposes.

The proper course of procedure for the architect is to weigh the relative merits of the various systems of reinforced concrete now in use, and after a careful study of them to adopt that system which in his opinion is most applicable to the work in hand. His investigations should cover the following points:

(1) The experience of the specialist in the particular type of construction.

(2) The organisation of the specialist as governing his ability to prepare the information required in the shortest time.

(3) The economy of the system used by the specialist.

(4) The efficiency of the system under consideration.

(5) Whether the system permits of open competition in tendering for the carrying out of the work, or whether it is confined to limited competition.

Having selected his system and his firm of specialists, the architect should then ask for the preparation of detailed drawings and specifications by that firm. The designs so submitted can be carefully prepared, and will render possible the preparation of proper quantities, and thus any contention with the contractor in this respect will be avoided. The design can then be issued amongst various contractors for tendering purposes, competition by these means being confined within its proper sphere.

Although they readily agree in theory to the principle that specialists should not be asked to compete, some architects feel reluctant to be guided by this principle in practice, because they think their action will not be approved by their clients; but surely the client who places sufficient confidence in an architect to accept his advice and designs will have sufficient confidence in the architect's judgment as to the selection of the reinforced concrete specialist. The architect nominates his quantity surveyor, and therefore there is no reason why he should not nominate his reinforced concrete specialist. If the architect can freely consult the specialist before the plans are finally completed he can take advantage of the specialist's experience as to the best arrangement of the various members that will produce the most economical and efficient construction. As the main object of an architect, when he engages a reinforced concrete specialist, is his client's advantage, the client should not object to the payment of the fees charged by the specialist, any more than a patient should object to the payment of the fee to the consulting physician when called in by the family physician. . . .

In conclusion, we would point out that the duties of the specialist do not conflict with those of the architect. Their fields of operation are entirely different, but naturally dependent. From one point of view, the reinforced concrete specialist, by being nominated by the architect, becomes thereby subject to his control and direction. But in no sense is there competition between them; indeed, architects often bear eloquent testimony to the valuable assistance they have received from the suggestions of reinforced concrete specialists.

REINFORCED FLOOR SLABS, PAVEMENTS, AND ROADS.

"B.R.C." will be recognised as the initials of the British Reinforced Concrete Engineering Co., Ltd., whose head office is at 82, Victoria Street, Westminster, and whose works are at Trafford Park, Manchester. They have just issued three dainty booklets, dealing respectively with "Floor Slabs Reinforced with B.R.C. Fabric," "Ground Floors, Pavements, and Yards," reinforced with similar material, and "Road Beds Reinforced with B.R.C. Mesh."

B.R.C. electrically cross-welded steel-wire fabric consists of a wire mesh made up of a series of parallel longitudinal wires, held at fixed distances apart by means of transverse wires arranged at right angles to the longitudinal ones, and securely welded to them at the points of contact by a patented electrical process. It is claimed that the material provides an ideal reinforcement for concrete floor slabs, the longitudinal wires resisting the main tensile stresses, and the transverse wires assisting to distribute concentrated load and to prevent cracking due to changes of temperature. It is stated that the breaking strength of the steel wire used varies from 80,000 lb. to 110,000 lb. per square inch, and the stress at the elastic limit from 55,000 to 90,000 lb. per square inch. Useful tables of safe loads for various classes of buildings are included in the booklet on Floor Slabs.

A special size of B.R.C. steel-wire mesh is made for use in all classes of concrete floors or pavements laid directly on the ground. Its employment in this service enables a considerable reduction in the thickness of the concrete (a thickness of 3 in. or 4 in. being generally sufficient), while the floor may be much more quickly laid, its strength is increased, and the liability to cracking is in most cases entirely eliminated. The size of this special mesh is 6 in. by 6 in., the rolls being 240 ft. long by 75 in. wide and weighing 268 lb. Other sizes are stocked for use in suspended reinforced concrete floors.

An important adaptation of this fi
mesh is that shown in a further sp
booklet, in which B.R.C. Road-Bed R
forcement is described and illustrated
is pointed out that, with the adven
modern systems of traction, simple rol
action has given place to progress by s
leaps and bounds, which have the effe
a series of rhythmic blows, playing h
with a road-bed of weak construct
This firm's road-bed reinforcement
been successfully used at Golders Gr
in Manchester, in Belfast, and elsewh
This reinforcement supplies a cus
between the wearing surface and
ground below; and a perfect surfac
maintained even when the road has t
cut after completion, as the same
which cuts through the concrete is cap
of cutting through the reinforcement,
the damage to the surface which c
monly results from subsidence of
trench-filling is wholly avoided.
system is advantageous for all sorts
roads, town or country, and is particul
valuable in overcoming the special diffi
ties of tramway foundations.

A COMPREHENSIVE CATALOGUE BUILDERS' REQUISITES.

Of real practical value to the archi
and builder is the catalogue of build
requisites which Messrs. Young
Marten, Ltd., Caledonian Works, St
ford, London, E., are issuing in
volumes, the first of which is now be
us, and comprises "Requisites for Bu
ing Construction, Compiled for the Us
Architects, Builders, Contractors, De
rators, and Engineers." In reality
range of utility is more extensive tha
indicated in the explanatory sub-ti
which was apparently chosen for the alp
betical succession of A to E.

To state succinctly, indeed, the v
comprehensive scope of the book is
matter of considerable difficulty. Mes
Young and Marten provide every vari
of builders' supplies, and the very subs
tial bulk of their catalogue is a natu
reflex of the firm's activities in th
twenty departments and branches. T
showrooms, wharves, sidings, and wa
houses at Stratford, London, E., are p
haps the largest of their kind in the wo
reserved for stocking exclusively build
goods, the main warehouses possessing
lineal floor-space of half a mile, while
unloading dock and its shunting s
accommodate forty full-sized go
wagons with engine. One visit to
Stratford premises will enable the visi
from town, country, or the colonies,
inspect every article required in the c
struction of any class of building.
addition, the firm own several freeh
wharves, the most important of these be
that of St. Andrew's, Millwall, which
used as a reserve stocking area.

The first section of the catalogue—an
very large and important section it is
deals exhaustively with heating and co
ing apparatus, of which hundreds
designs are shown. First comes t
"Hue" adaptable barless fire, whi
manufactured specially to suit the ba
area of existing grates, gives all the a
vantages of a barless fire without t
trouble and expense that frequently atte
such conversions. The "Hue" fire w
burn for three to four hours without atte
tion, and is cleanly and comely as well
economical. Its adaptability to varyi
circumstances is clearly demonstrated
an interesting series of illustrations in t

atalogue. A modification of the “Hue” re, which burns coal, is the “Ray” fire hich is fitted with an atmospheric gas urner and imitation coal fuel. A large umber of really artistic patterns of Hue” interiors or surrounds are shown; nd the illustrations of artistic mantel gisters occupy many pages, while many f the tile panels and hearth tiles shown in series of coloured plates are of exquisite esign and colouring—a description that pplies with equal force to the floor tiles nd dado wall tiling.

Cooking ranges are listed comprehenvely as to size, type, and service, and are ollowed by anthracite coal stoves, each f which is now fitted with a patent autoatic check valve that equalises the raught in the chimney and increases venlation; while among the heating stoves or halls, schools, shops, offices, greenouses, etc., are the “Tortoise,” the Rose,” and the “Kosey.” Plumbers' nd laundry stoves are also shown.

A very strong “Plumbers' and Sanitary ngineers' Requisites Section” contains a rge variety of closet suites, urinals, atrines, as well as tubes and fittings for eam, water, and gas, tools for plumbers, rain-cleansing apparatus, ventilators, and moke-curing appliances, lead traps, and rasswork, dustbins, sheet-iron goods, isterns, tanks, lavatories, geysers, and a rge number and variety of baths and athroom fittings.

Equally comprehensive with the foreoing sections are those on decorators' aint, colour, varnish, and enamels; mber and joinery; ironmongery—a parcularly valuable section, which includes, addition to almost every detail of metal are, a large number of miscellaneous ols, besides several pages showing uilders' plant and materials and conactors' sundries; window glass, including gured, rolled, embossed and leaded ained glass, puttyless glazing; and uilders' castings of all kinds, which is erhaps the most comprehensive section of ll, as it includes every kind of casting, rge and small, from a gutter bracket to a Goliath” boiler, and from a bolt-nut to baker's oven.

This truly encyclopædic catalogue, hich consists of more than 560 pages, 2¼ in. by 9¾ in., is the more serviceable or its copious index, which enables nstant reference to any of the many thousands of items that the book contains.

TRADE AND CRAFT.

Asphalte for Roofs, etc.

Claridge's asphalte is being used on the oofs of the Imperial Tobacco Company's remises, Millbank; of H.M. Stationery ffices, Stamford Street; of Skelton astle, near Saltburn; and for dampourse at Messrs. W. H. Smith and Son's rinting offices, Stamford Street, London.

Fibrous Plasterwork for Belfast Theatre.

We understand that Messrs. John anner and Son have been entrusted with he important contract for the fibrous lasterwork and the redecoration throughut of the Belfast Hippodrome, which was ecently destroyed by fire.

“Pudlo” Waterproofing.

The Public Works Department of New outh Wales are using “Pudlo,” the owder which makes cement waterproof, or their cement and concrete work.

“Pudlo” is also being employed for rendering the backs of fountains in the schools of the London County Council.

According to the report of the Inspector of Ancient Monuments, H.M. Office of Works, in restoring Weobley and Monmouth Castles, have used “Pudlo” for making those structures waterproof.

Waterproofing by “Ceresit.”

Among recent undertakings in which use is being made of “Ceresit” are a number in the Aberdeen district, including the following: Floors in large extensions at the Convent of the Sacred Heart, Aberdeen; general work on the Blair Atholl Estate, Perthshire; floors and general improvement work on Lord Aberdeen's estate, Haddo House, Aberdeenshire; and municipal works at Banchory, Kincardineshire. Among recent contracts undertaken in the counties of Northumberland and Durham alone, in connection with which “Ceresit” is being used, are the following: In concrete under wood block floors at the City Lunatic Asylum, Newcastle-on-Tyne; for walls and concrete roof of the electric power station at Wallsend-on-Tyne; for the concrete roof at the electric sub-station, Gateshead-on-Tyne; for the walls of Lloyds Bank, Whitley Bay; for the walls of the Trinity Wesleyan Schools, Whitley Bay; for the concrete roof of the electric sub-station, Newbiggin; and at Lemmington Hall, Whittingham.

Hospital Ventilators.

The Isolation Hospital, Billericay, is being supplied with Shorland's exhaust roof and special inlet ventilators by Messrs. E. H. Shorland and Brother, Ltd. of Failsworth, Manchester. Shorland's patent exhaust roof ventilators are also being used in the new Catholic Schools, West Hartlepool.

Changes of Address.

Messrs. A. and F. Manuelle, granite quarry owners and marble and stone merchants, have removed to Bishopsgate House, 80, Bishopsgate, London, E.C. The telegraphic address remains as at present, viz., “Feldspar, London,” but the telephone number is altered to London Wall 8836 (two lines).

Messrs. Stewarts and Lloyds, Ltd., are transferring their Birmingham offices to Broad Street Chambers, Birmingham.

The Carron Company, of Carron Works, Carron, Stirlingshire, intimate the removal of their London West-End showroom business from 23, Princes Street, and 3, Berners Street to new premises at 50, Berners Street, Oxford Street, London, W., where the company have on view a large selection of high-class “Carron” and “Longden” pattern cooking ranges, fire grates, baths, etc.

New Barracks at Farnborough.

Messrs. Wilson and Co., 79, Queen Street, London, E.C., inform us that they have secured from the War Office the contract for all the asbestos cement sheets and tiles required in connection with the above new barracks, namely, 70,000 ft. of roofing and 300,000 ft. of sheeting. This is the fourth similar contract secured by the same firm during the last twelve months.

Safes and Strong Rooms.

An important order for a large safe deposit and strong rooms for a bank in Buenos Aires has been obtained by Lips, Limited, of Kingsway House, Kingsway, London, W.C. Samples of their well-known safes, strong room doors, and high-quality locks can be seen at their showroom in Kingsway by those interested in these articles.

“Kahncrete Engineering.”

A new bi-monthly publication, edited by E. Temple Orme, LL.D., and published by the Trussed Concrete Steel Co., Caxton House, Westminster, is called “Kahncrete Engineering,” and is “devoted to reinforced concrete as exemplified by the Kahn System.” Primarily a trade publication, with its main object frankly avowed in its title, as well as in the “foreword” to the first issue, this well-produced and finely illustrated periodical nevertheless presents an excellent array of good practical articles, theoretical as well as descriptive, and entirely free from undue insistence on the merits of any particular system of reinforced concrete.

Of particular interest to architects is the first article, on “The Architect and the Reinforced Concrete Specialist,” in which the much-debated question of relative functions is discussed ably and diplomatically. “The relationship between the architect and the specialist should be a purely professional one, leaving the specialist at liberty to give unstintingly of his best.” The excellent tone of this article will appeal to architects, who will be glad, also, of the course of procedure outlined for their benefit in consulting specialists.

Other articles in the first issue are: “Charges for Professional Services Rendered,” “Design of Wood Bridge, Guildford,” by H. Haughton; “A Model Factory Building,” by Moritz Kahn, describing and illustrating the new premises of Messrs. Gramophone Co., Ltd., at Hayes; “The York Water Tower,” by G. A. Cooper, M.Sc.; “Cost of Road Bridges,” by C. F. Priestley. These articles are followed by a number of short but useful practical notes.

Applications for this unquestionably useful publication should be made under a professional letter-heading, or should be accompanied by a business card, addressed to “The Editor, Kahncrete Engineering, c.o. The Trussed Concrete Steel Co., Ltd., Caxton House, Westminster,” when their names will be entered upon the subscription list free of charge. Students may subscribe at the nominal cost of 2s. per annum.

SPECIAL LEGAL REPORT.

Super-Tax Appeal.

Sir H. H. Bartlett v. the Commissioners of Inland Revenue.

June 11. King's Bench Division. Before Mr. Justice Scrutton.

This was an appeal, in a case stated under the Finance (1909-10) Act, 1910, by Sir Herbert Henry Bartlett, of Hardington Mandeville, Somerset, against a decision of the Commissioners of Inland Revenue, on his assessment to super-tax.

Mr. Gore-Browne, K.C., appeared for the appellant, and the Solicitor-General, Sir S. Buckmaster, K.C., for the Commissioners.

Mr. Gore-Browne stated that Sir Herbert Bartlett appealed against an assessment to super-tax made upon him for the year ended April 5, 1910. In computing the total income of his client from all sources the Commissioners had included a large sum in respect of his trade profits. The appeal related solely to this sum. For a period commencing April 6, 1908, and ended December 28, 1908, Sir Herbert

Bartlett, as sole proprietor, was carrying on the business of a builder and contractor under the style of Perry and Co. In respect of his profits on that business, an assessment was made on him for the year ended April 5, 1909, under Schedule "D," and duty was paid. In December, 1908, Sir Herbert Bartlett transferred to a limited company all his rights and liabilities as proprietor of Perry and Co., together with all trading profits as from January, 1908. The contention of his client, the appellant, was that the assessment for super-tax for the year ended April 5, 1910, was erroneous in law, inasmuch as the Commissioners did not assess him only on his actual profits made from the trade of Perry and Co., during 1908-9, while he was himself carrying on that business and not longer, and did not hold that during the year 1908-9 the profits of the appellant from Perry and Co. were nil, and did not, in fact, belong to him as an individual within the meaning of Section 66 of the Finance Act, 1909-10. The contention of the respondents, as counsel understood it, was that Sir Herbert did, in fact, as sole proprietor of Perry and Co., carry on the business from April 6 to December 28, 1908; that the business itself and all profits up to and including December 28, 1908, belonged to him, and that the subsequent sale of those profits to the company did not in any way affect his liability to pay super-tax. The Commissioners, said Mr. Gore-Browne, held that the assessment was correctly made, and without taking evidence as to the amount of the actual trading profits for the period from April 6 to December 28, 1908, confirmed it. Counsel now contended that the Commissioners ought themselves to have investigated and taken evidence in regard to the appellant's profits.

The Solicitor-General argued that it was necessary, by virtue of Section 66 of the Act of 1910, to consider what the income was for the year ended April, 1909, and it was not denied that Sir Herbert's income, taken for the year ended April, 1909, was correctly estimated, according to the provisions of the Income Tax Acts, at the total sum of £58,000 odd.

After long legal arguments, his Lordship held that the Commissioners had arrived at a right conclusion, and dismissed the appeal, with costs.

COMPETITIONS.

Police and Fire Station, Redhill.

Reigate Borough Council invite competitive designs for a new police and fire station to be erected in Redhill. Premiums of forty, twenty, and ten guineas are offered for the designs placed first, second, and third respectively. The conditions of the competition may be obtained, together with a copy of the site plan, on application to Mr. Alfred Smith, Town Clerk, Municipal Buildings, Reigate. Designs have to be sent in by July 25.

Academy, Perth.

Perth School Board have decided to open to all architects practising in the city and county of Perth a competition for designs for a proposed new academy.

School, Gateshead.

Gateshead Education Committee invite competitive designs for a new school to accommodate 700 scholars, and to be erected in King Edward Street, Sunderland Road, Gateshead. A copy of the conditions and a plan of the site may be had on application to Mr. R. T. Edington, Education Offices, Gateshead.

Children's Home, Burton-on-Trent.

The assessor in this competition (Mr. T. Kidd) has made the following awards: 1 (£25), Mr. Joseph Holt, A.R.I.B.A., Manchester; 2 (£10), Mr. Herbert Kenchington, A.R.I.B.A., London.

Cottages, Westerham.

The Housing Committee of Sevenoaks R.D.C. have recommended the adoption of the plans of Mr. M. Maberley Smith, of London, W., for the erection of eight cottages at Westerham.

PROJECTED NEW WORKS.

Art School and Town Hall, Selby.

A scheme is under consideration at Selby for the building of a new art school and town hall.

Workmen's Dwellings, Newquay.

The Newquay U.D.C. have decided to invite tenders for the erection of twenty workmen's dwellings.

Cottages, Samford, Suffolk.

The Samford Rural District Council have invited plans and designs for the erection of cottages for the working classes in their district.

Shops, Darlington.

Darlington Town Council have approved plans for the erection of shops and billiard room, Northgate, and warehouse, Leadenhall Street, for Messrs. Taylor and Minor.

Extension, Bristol.

Messrs. Mardon, Son and Hall, Ltd., have acquired a considerable block of property at Temple Gate for extension of business premises and to provide a recreation room for the girls in their employment.

New Market, Edinburgh.

A joint meeting of the Lord Provost's Sub-Committee and the Markets Sub-Committee of Edinburgh Town Council have considered plans for a proposed new market on the site of the old gasworks in New Street at an estimated cost of £100,000, including the cost of the site.

Housing Scheme, Bentley.

The Bentley (Yorks) U.D.C. propose to erect ninety-nine houses at an approximate cost of £24,000 in connection with their housing scheme. Mr. Stanley Empsall, of Maidenhead, who has been appointed temporary assistant surveyor to the Bexley Council, is to have charge of the work.

Town Planning, Lanarkshire.

The District Committee of the Middle Ward of the county of Lanark are to apply to the Local Government Board for Scotland for permission to town plan a part of the territory lying to the south-west and east of Cambuslang, embracing Kirkhill. It is expected that the Lower Ward and the Burgh of Rutherglen will come into a joint scheme, which will embrace 3,000 acres and form the most important town planning scheme in the West of Scotland.

Arcade, Birmingham.

A new arcade, to be called "The Windsor," is to be constructed in Birmingham, cutting through from Bull Street into the North-Western Arcade. The architects are Messrs. Watson and Johnson, who have decided to construct the Bull Street elevation in the Renaissance style. The work will involve the demolition of the prese buildings, and provision is to be made fifteen shops. The promoters of the ent prise are Messrs. Wilkinson and Ridd Ltd.

Workmen's Houses, Leiston.

Plans have been submitted to the Lo Government Board by the Leist (Suffolk) U.D.C. for the erection of fi workmen's dwellings.

Improvement Scheme, Bognor.

The Bognor Urban Council ha acquired six freehold residences and son cottage property overlooking the Mari Parade at a cost of £6,150, with a view converting the ground so occupied into pleasure garden.

Sanatorium, Wells.

The Local Government Board have pr visionally agreed to the purchase of a si on the Dulcate Estate, near Wells, by th Somerset County Council for the erecti of a tuberculosis sanatorium. Final san tion depends on satisfactory arrangemen being made in regard to the water supply

Aquarium Improvement, Brighton.

The Special Committee appointed by th Brighton Town Council to consider th best use to be made of the Aquarium sit have suggested an improvement schem which will cost £25,000. A concert hall t accommodate 1,200 people is proposed, o the eastern portion of the site, and the wes tern roofs are to be remodelled so as t form promenade and garden terrace Competitive designs will be invited.

Building Boom in Yorkshire.

A large number of houses are to b erected in the mining district of Wath-on Dearne, Yorkshire. The Wath Main Co liery Company have acquired the Bolto Hall estate, in the neighbouring parish Bolton, and on this they propose to erec 200 houses for the use of their workmen The Bolton Council will erect 310 house on a neighbouring site under their housin scheme, and the Dearne Valley Collier Company will build 123 houses for the men at Great Houghton.

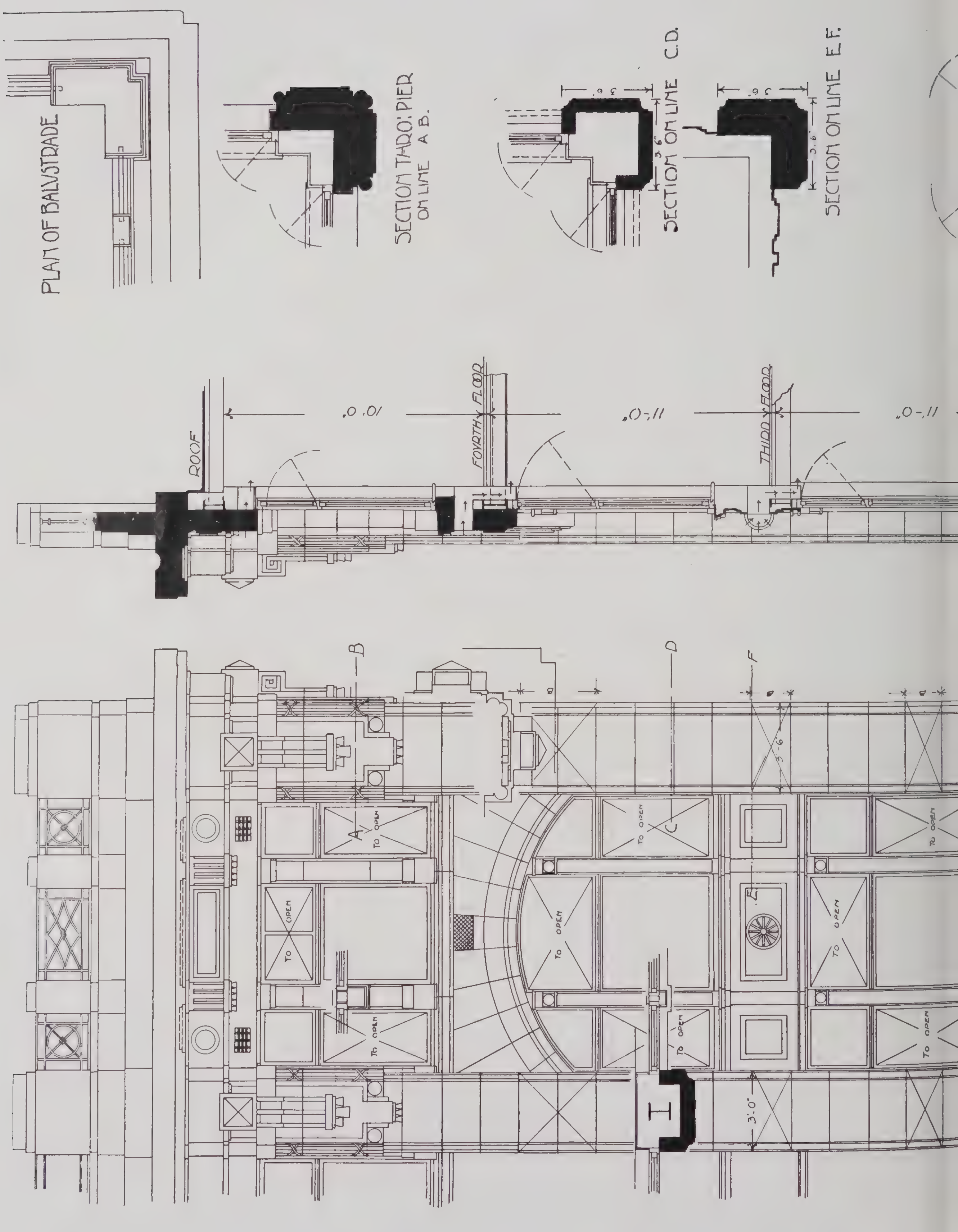
THE BUILDING TRADE CRISIS

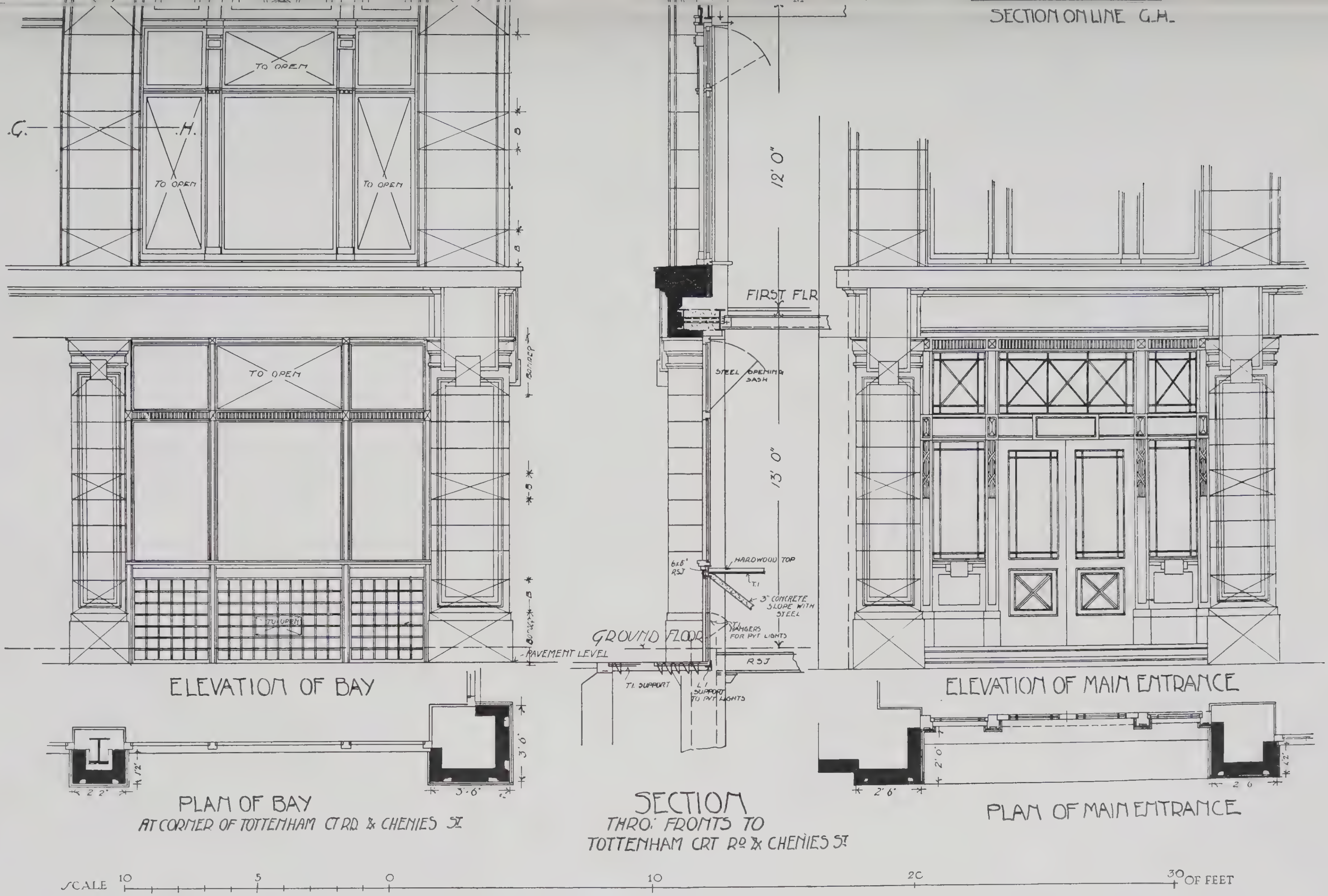
As a result of the negotiations that took place on June 9, when the National Con ciliation Board received, at the Connaugh Rooms, a deputation representative of te trade unions, another ballot of the men i taking place, this time on the basis o agreement arrived at in the aforesaid nego tiations.

On the same date the Council of the National Federation of Building Trade Employers had been called together t carry into effect the resolution which i passed on May 11—that is, to order a general lock-out since no settlement had been reached. The Council did not deal with that resolution, but discussed the suggestions for a settlement submitted by the Conciliation Board, and afterwards issued the following official statement:

"Whereas a deputation representing the head executives of trade unions has conferred this day with the National Conciliation Board and subsequently with a deputation of this Council, and a basis of agreement has been arrived at, it is resolved that this meeting be adjourned until such time as the President may determine, in the hope that in the meantime the provisional agreement may be carried into effect."

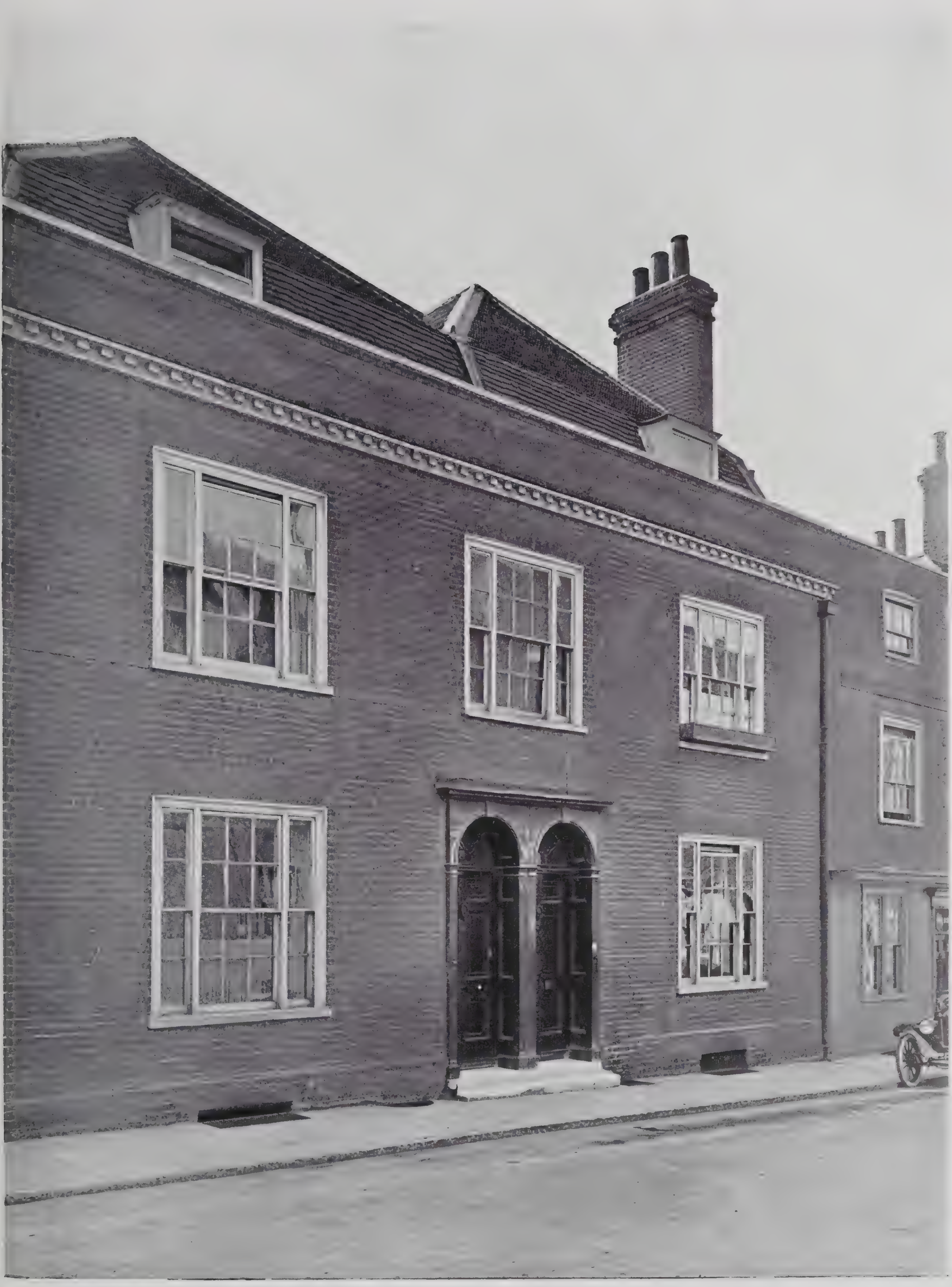
It is confidently anticipated that, as a result of the ballot, the dispute will come to an end—perhaps with the present week.


PLAN OF BALUSTRADE
SECTION THRO' PIER ON LINE A B.
SECTION ON LINE C.D.
SECTION ON LINE E.F.
3' 6"
3' 6"
ROOF
FOURTH FLOOR
THIRD FLOOR
10' 0"
11'-0"
11'-0"
A
B
C
D
E
F
TO OPEN
3'-6"
3'-0"

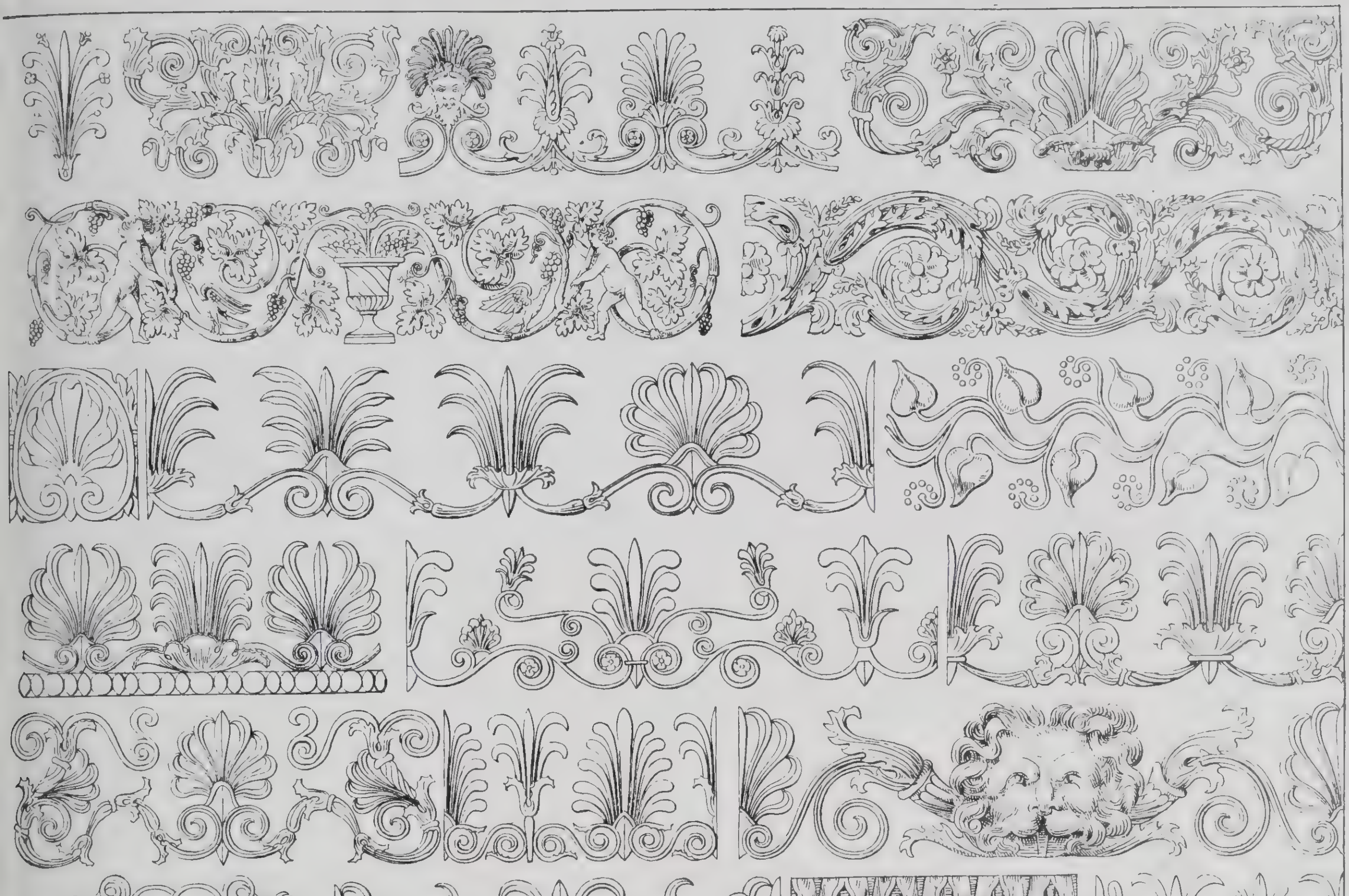


WORKING DRAWINGS BY WELL-KNOWN ARCHITECTS (NEW SERIES). XXIX.—NEW PREMISES FOR THE BOSCH-MAGNETO CO., LTD., TOTTENHAM COURT ROAD, LONDON: DETAIL OF ONE BAY OF ELEVATION.

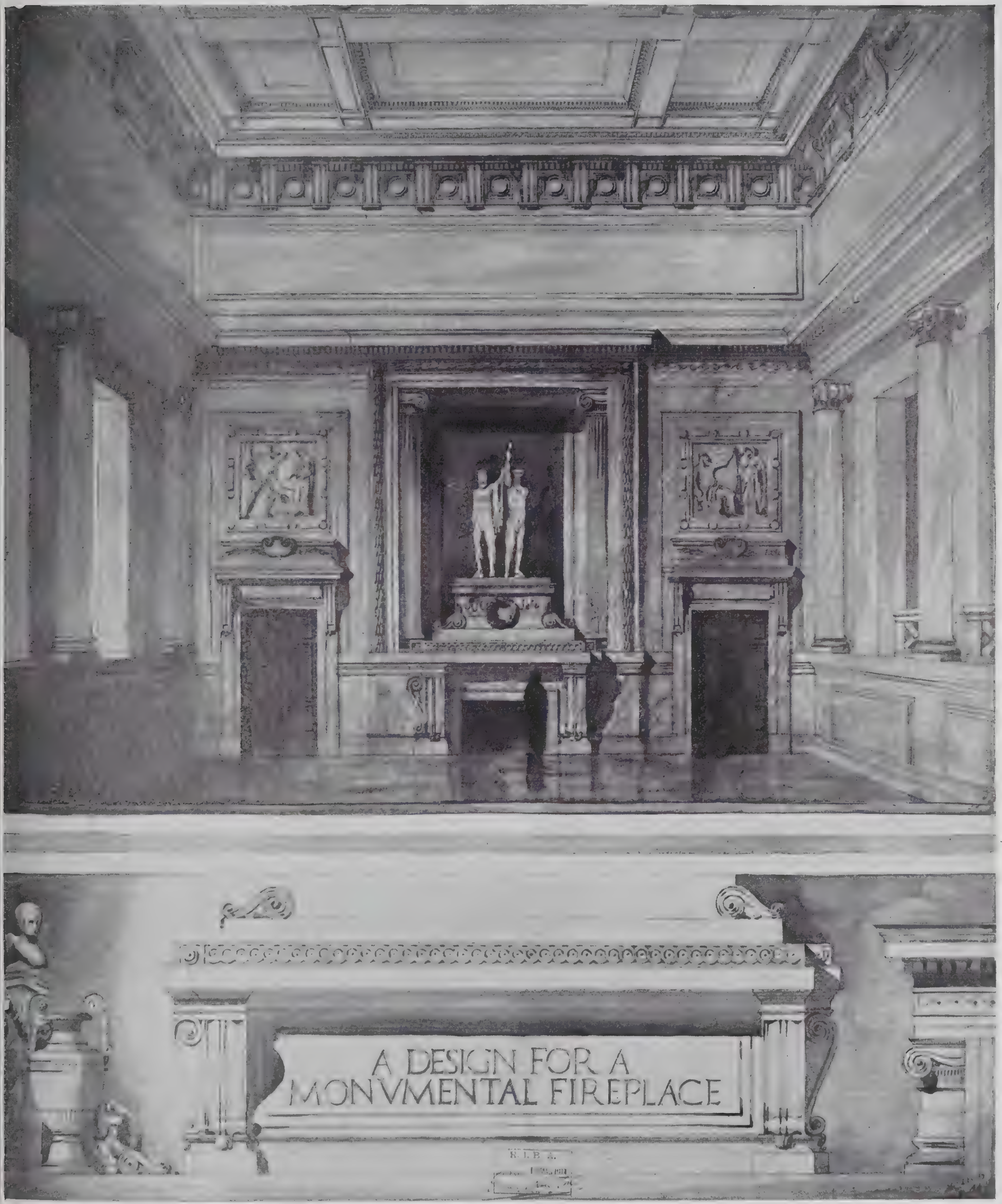
HOBDEN AND PORRI, ARCHITECTS



SMALL HOUSES OF THE LATE GEORGIAN PERIOD. XIII.—PAIR OF HOUSES, QUARRY STREET, GUILDFORD.

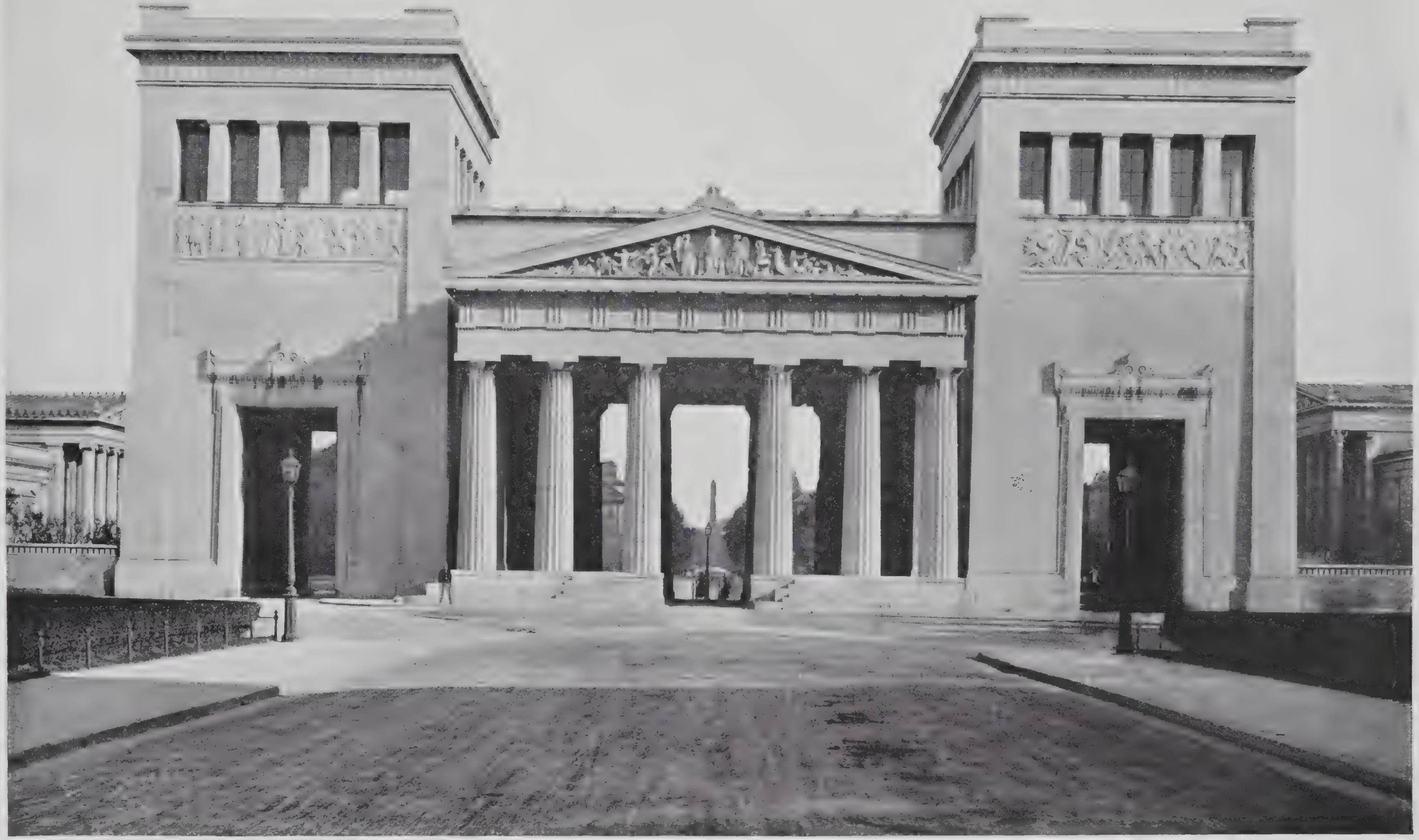


COTTINGHAM'S DESIGNS FOR IRONWORK. XVI.—GREEK, ROMAN, AND ETRUSCAN ORNAMENTS FOR BORDERS, FRIEZES, PILASTERS, CAPITALS, ETC.



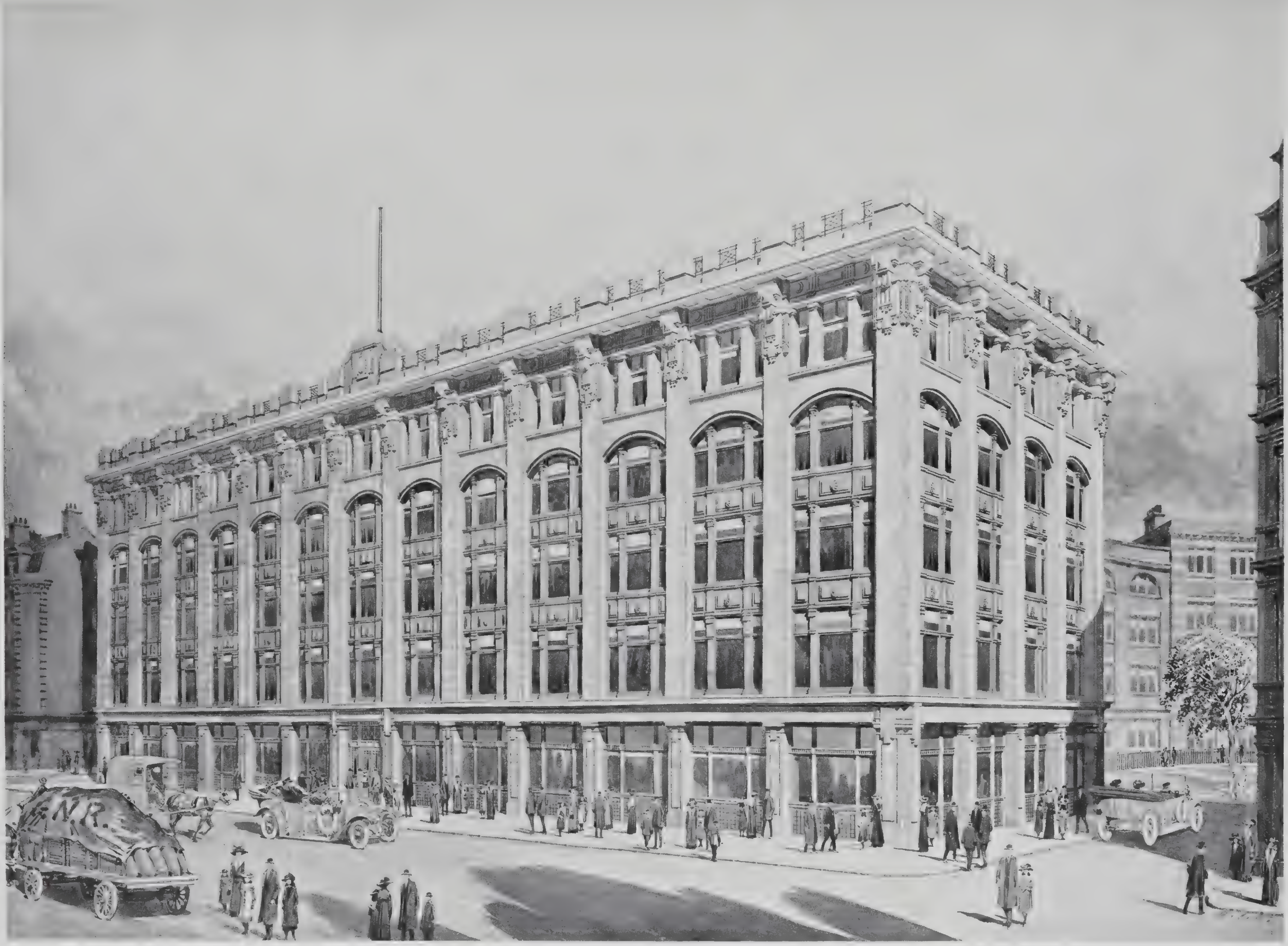
STUDENTS' DRAWINGS. XX.– DESIGN FOR A MONUMENTAL FIREPLACE.

BY D. C. L. DERRY.



MONUMENTAL ARCHITECTURE. XXII.—THE PROPYLÆA GATES, MUNICH.

VON KLENZE, ARCHITECT.



CURRENT ARCHITECTURE. LXVIII.—NEW PREMISES FOR THE BOSCH-MAGNETO CO., LTD., TOTTENHAM COURT ROAD, LONDON.

HOBDEN AND PORRI, ARCHITECTS.

PRACTICAL CHART OF TOWN PLANNING PROCEDURE.

FOR SCHEMES PREPARED BY OWNERS AND PROPOSED TO BE ADOPTED BY LOCAL AUTHORITIES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (England and Wales), 1910.

Compiled by R. IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art. = The Articles of the Town Planning Procedure Regulations (England and Wales), 1910. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = An Owner's Scheme proposed to be Adopted by an L.A. under the Act of 1909. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets

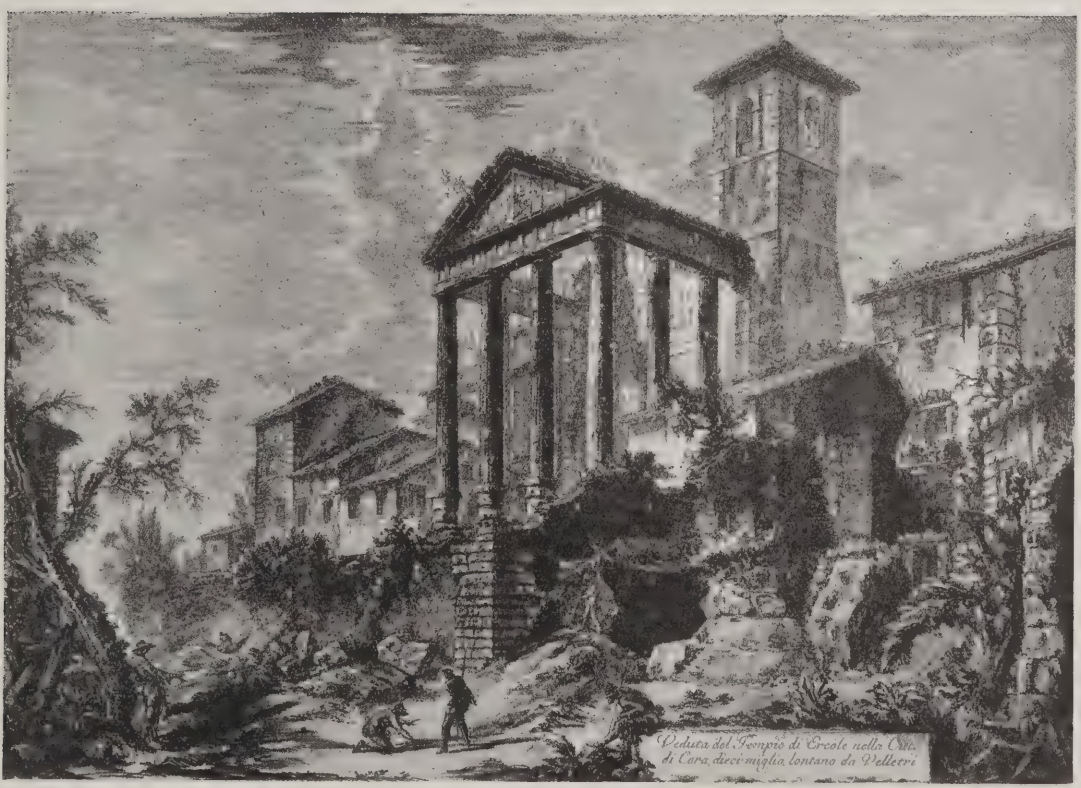
No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A.	Column 4B.	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 2. Application to L.G.B. for authority to adopt a scheme.	Not less than TWO MONTHS [Art. i. (*a*)] after last of the notices served on Owners, etc., and publication of Advertisement under Art. i. (*a*) (see Stage 1, Col. 3 (*b*), (*c*), (*d*)). Resolution to be passed by L.A. authorising application for Authority to adopt a scheme for area shown on Map No. 2. [Art. iv. (*a*) and (*b*)] This Resolution is the Statutory Resolution required by Art. iv. (*a*) and (*c*), and must be transmitted to the L.G.B. without delay accompanied by the documents set out in Cols. 6A and 6B of this Stage. [Art. iv. (*a*) and (*c*)] The date of this Resolution is the time from which the restrictions as to Compensation under Section 58 (2) Act of 1909 begin to operate unless L.G.B. fix otherwise. [Art. iv. (*a*) and Section 58 (2) Act of 1909]	Immediately after transmission of application to L.G.B. give notice of same, and date of Resolution by Advertisement in Local Paper. [Art. xi.]				(*a*) Copy of Map No. 1. [Arts. i. (*b*) v. (*a*) and xxxi.] (*b*) Map No. 2 or copy certified by Clerk to L.A. [Arts. iv. (*b*) v. (*b*) and vii.] (*c*) Map No. 3. [Art. v. (*c*)] (*d*) Statements giving particulars of scheme required by Article viii. [Art. viii. (*a*), (*b*), (*c*), (*d*), (*e*), (*f*), (*g*)] (*e*) Estimate of cost of scheme. [Art. x. (*a*)]	(*a*) Certified copy of Resolution. [Art. iv. (*c*)] (*b*) Statement as to Membership, Attendance, and Voting upon Resolution of L.A. [Art. iv. (*c*)] (*c*) Statutory Declaration containing information required by Art. xxxi. and Exhibits in proof of compliance with the requirements of Art. i. [Arts. v. (*a*) and xxxi.] The Exhibits required are (1) Copy of form of Notice served under Article i.; (2) Copy of Map No. 1 (see Stage 2, Col. 6A (*a*)); (3) Copy of Paper containing Advertisement. [Art. xxxi.] (*d*) Copy of all written objections not withdrawn or removed. [Art. v. (*d*)] (*e*) Statement as to acreage, population, debt, etc., of L.A [Art. x. (*b*)] (*f*) (1) Copy of Scheme with suggested modifications (if any) by L.A. [Art. v. (*e*)]; (2) Statement giving additional particulars required by Art. ix. [Art. ix. (*a*), (*b*), (*c*), (*d*), (*e*)] (*g*) Statement as to acreage, population, debt, etc., by any other L.A. bearing part of cost of scheme. [Art. x. (*c*)] (*h*) Covering letter. [Art. iv. (*c*)]	(*a*) L.G.B. give Notice of Public Enquiry (if any), such notices to be posted by L.A. as L.G.B. may direct. (*b*) Probable Public Enquiry by L.G.B. [see L.G.B.'s Circular letter of 3rd May, 1910], to enable them to decide upon the necessity for, and the Area to be included in the Scheme. [Sect. 54 (2), and 63 Act of 1909] (*c*) L.G.B. give Authority or otherwise to adoption of a scheme with or without modifications. [Art. xii. (*a*)]

CHART OF TOWN PLANNING PROCEDURE FOR OWNERS' SCHEMES, TO BE ADOPTED BY LOCAL AUTHORITIES—STAGE 2.

THE
ARCHITECTS' & BUILDERS'
JOURNAL.

Wednesday, June 24, 1914. Volume XXXIX. No. 1016.

No. 90.


Veduta del Tempio di Ercole nella Città
di Cora, dieci miglia lontano da Velletri

(*From Piranesi.*)

THE ARCHITECTS' & BUILDERS' JOURNAL.

JUNE 24, 1914. *CAXTON HOUSE, WESTMINSTER.* VOLUME 39. No. 1016.

Below the Surface.

LAST week there occurred in Paris one of those disasters to life and property which create a feeling of distinct uneasiness in the minds of all who dwell in a big modern city. The destruction of a city by the shells of an enemy's army, by an earthquake, or an ordinary flood, or fire, or a torrent of mountain lava is sufficiently terrible: but the subsidence of even a few portions of a city's thoroughfares through the prime agency of a thunderstorm's torrential rain is in many respects much more disquieting to the average mind. The reason is easy to discover. War has happily become a rare thing, and the dangers of war to a capital are proportionately far removed. Comparatively few cities are built within the earthquake zone, or subject to be taken unawares by floods, and the menace of a volcano is remoter still. But thunderstorms are common happenings, and all cities, undermined to a greater or less extent as they are by sewers and drainpipes fashioned by the engineering wit of man, are liable to be temporarily inconvenienced by the failure of the sewers to cope with the pressure of a more than ordinary deluge. When this inconvenience develops into a cataclysmic disaster, as has happened in Paris, the most equable mind is apt to reflect that the same thing might happen in similar circumstances in any other city honeycombed below the surface of the earth with tubes and tunnellings similar to those in the French capital. It is probable—indeed, it seems to be established—that the underground railway and the drains that lie alongside of it are constructed exceptionally near the surface, and that the recent catastrophe was largely due to this fact. It may be true that the underground network of gas, electric light, sewage, and compressed air mains has been recently extended in every direction without adequate control—that recklessness on the part of a few contractors has brought nemesis upon the citizens at large. Nevertheless, the thought must necessarily recur that engineering science is not unlimited in its powers, and that even in the best-regulated city the forces of Nature may one day attack and overwhelm the scientific defences that have been erected to withstand them.

What happened in Paris was that at certain points the sewer along the new line of the underground railway from the Opera to the Porte St. Cloud burst under the pressure of the heavy rainfall, lasting from three o'clock in the afternoon to half-past seven. The water thus liberated washed away the earth which supported the main drains, which, in their turn, were called upon to bear the weight of the roadway and the burden of some very heavy tramway traffic on it. This they failed to do. In the Avenue d'Antin, the Place St. Philippe, and the Boulevard Haussmann, the earth opened, and anybody who happened to be passing went down into a gaping pit, to find death in mud and filth. Fifteen persons are believed to have perished in a hole which opened in the Place St. Philippe du Roule. In the middle of the square in front of the Church of St. Augustin, a taxicab, the driver, and hi fare were engulfed. On the morning following th disaster, a wall of a house under construction in th Rue d'Aguessau, opposite the British Embassy collapsed; a hole has appeared in the courtyard pavement of a house in the Rue Pierre, another near th works of the Metropolitan Railway in the Place Iéna and it is feared that much additional damage has ye to reveal itself. Engineers and others are disposed t find the cause of the subsidences in the making of th new Tube Railway line from the Opera to the Port St. Cloud, which has involved a serious displacement o the soil. At one point the roadway has actually fallen into the tunnels. Others, taking a wider view, blame not merely the advent of the Tube Company, but the general system under which it has been possible t undermine Paris so close to the surface, and all are indignant at the Municipal Council for letting such things be.

A thorough investigation is to be made into the method of construction of the Paris underground railways, and until the report of the investigators is published it is useless to speculate as to how far and in what respect these were responsible for the tragedy It is, however, already certain that grave errors o engineering judgment, if nothing worse, have been made in the fashioning of underground Paris, and tha while French architects have been doing their best t beautify the streets with fine buildings, the French contractor and the French engineer have been busy beneath, imperilling the very existence of these buildings and of the people who dwell in them. Now unscrupulous building above ground is bad enough but interference with the bowels of the city without ensuring a sufficiently wide margin of public safety is nothing short of criminality. It has been claimed, and with justice, that the French are a logical people, and the planning of the Paris streets is the very essence of logic applied to the creation of an impressive and, in spite of its faults, a beautiful capital. But to pay close attention to one's building above the ground and to shut one's eyes to what is going on below is the negation of logic, and this is virtually what our Parisian friends have been doing.

In this country a twitter of excitement is heard now and again when the foundations of some historic building, such as St. Paul's, appear to be threatened by the proposal to build a new road to carry heavy traffic, and from time to time one hears murmurs of damage caused by vibration to this or that building along the line of a Tube. But no one thinks of a perpetual menace to our safety, from beneath the surface, and we are glad to believe that no one need think of it so far as London is concerned. In Paris, on the other hand, the importance of the subject has been brought home to the inhabitants in perhaps as unpleasant a form as could well be imagined. We do not envy the Municipal Council, who are supposed to have kept cognisance of the existing state of affairs, if the Report on the Railways should prove as damaging as is anticipated. But

isaster of this nature extends further than any one
or municipality. It touches the whole matter of
nomy and morality in town-making; of civic de-
pment; the relationship between the public body
the private contractor, the responsibilities of the
ineer to the community, in addition to a hundred-
-one technicalities of engineering and sanitary
nce of the first importance. By the human suffering
sorrow it has entailed, it raises these problems in
ore than usually acute form.

F. M.

The Building Trade Crisis.

HE third trade-union ballot in the London building
dispute rejects the proposals for settlement, and
thus creates a most critical situation. Every
sible concession has been made by the employers,
, in rejecting the very favourable terms offered, the
have disregarded the advice of their own leaders.
to be feared, therefore, that the result of this third
ot is typical of the same wanton and irrational spirit
dictated the breaches of agreement which
inated the struggle. Later information on the
s will be found on p. 454.

. Jean-Louis Pascal and the Royal Gold Medal.

N Monday evening the Royal Gold Medal was
to have been presented to M. Jean-Louis
Pascal, member of the Institute of France,
mander of the Legion of Honour, and winner of
Grand Prix de Rome, who, however, was unable
eceive it in person. Of his eminent standing as
architect, his remarkable accomplishment as a
ematician, and of the veneration in which he is
not only by the Beaux-Arts students who have
under the direct influence of his singularly
netic personality, but by the entire profession, of
ationalities, there is no need to speak at length on
present occasion, as an appreciation of the man
his work and worth was given in our issue of
uary 18 of the present year, together with a
ing portrait of him. He himself has said, "More
more will Architecture become universal. There
be little besides the conditions of climate and
rial which will make diversity." That is one of the
ns why we are always specially glad when just
sion arises for the bestowal of the Institute's Royal
medal on some distinguished foreigner; when the
l itself becomes a symbol not only of international
y but of the cosmopolitanism of Art. Most
rely and cordially, therefore, we congratulate M.
al on the addition of his honoured name to the
rious roll of R.I.B.A. Medallists.

Architectural Opinion.

ONG the several interesting letters printed in
the present issue is one that explains why its
writer did not vote in the R.I.B.A. elections. He
ot know the views of the candidates, and therefore
hat the safest thing to do with his voting list was
p it into the waste-paper basket. Obviously, the
nces that we are expected *to* draw are that this
ypical case, and that those who abstained from
should be credited with prudence rather than
ed with apathy. These, however, are points that
ld be futile to discuss, since the general reasons
stention are even less easy to ascertain than the
of the various candidates. For the latter
lty we see no adequate reason. At a time of
many candidates are, it is to be presumed, elected
views they express at meetings of the various
ations, central or affiliated. The speaking at
meetings of the London societies is sufficiently
ted; but we are too often left in the dark as to
the trend of architectural opinion in the provinces. Once again we take occasion to remind the officers of provincial societies that we are always glad to record their transactions

Rural Housing.

AT the annual meeting and conference of the Association of Rural District Councils of England and Wales, held in the London Guildhall on Wednesday and Thursday last, at which there were nearly 300 delegates, representing 142 councils, rural housing naturally formed one of the chief topics of discussion. It had been proposed that the Association should bring a Housing Bill into Parliament, but this project has been abandoned, mainly because the subject has got into the hands of political partisans, and the Association professes anxiety to keep free from political taint. The same prudential motive caused the meeting to modify, by omitting a reference to the Chancellor of the Exchequer's Budget promises of May 4, the resolution "That, having regard to the urgent need for housing in many rural districts, it is desirable that rural district councils should not in any way slacken their efforts in the provision of housing accommodation." Nevertheless, the inference is very plain that local authorities need arousing from the lethargy which naturally supervened on the Chancellor's announcement. But the Association's call to action would have had more force and consistency if they had not, for substantially (though not ostensibly) the same reason, incontinently abandoned their own Bill!

More "Linking-up" for London.

IN giving, before a Select Committee of the House of Commons last Wednesday, evidence in support of the Great Northern and Metropolitan Railway Companies' Bill, Sir Douglas Fox disputed the suggestion that property along the line of route of the proposed new lines would be injuriously affected by vibration from the heavy trains. The object of the Bill is to increase through communication from the City by railway with the outskirts of London—north, south, east, and west. Presumably these new lines are wanted, or capital would not be expended on their construction, and their burial underground is no doubt of the essence of the undertaking. On the whole, one would rather have them out of sight, because there is nothing quite so disfiguring as a town railway of the old type. In itself a miracle of ugliness, it winds its devious way through miles of devastating backs. The fronts are appalling, but the backs are simply obscene. Then the brutal bridges that cross the streets, and the poky, dirty, and villainously designed stations, have robbed many a suburb of its last vestige of self-respect. On the whole, we prefer the Tartarus of the Tube; although, if London is to be intersected and riddled with tubes, sapping the soil of its strengthening juices, and completing the consequent house-wreckage by shaking down the parts that have not sunk, there will not be overmuch reason to be grateful for the change.

A Difference in Standpoint.

MR. BAINES'S report on the Westminster Hall roof, of which we give a digest in this issue, reveals beneath its superstructure of technical, sometimes purely engineering, details a very real appreciation of the great historic interest and the artistic beauty of the subject of which it treats. This combination of qualities in a single temperament is what we look for in the first-class architect of to-day: he must have the scientific bent, for dealing with purely constructional problems; he must also possess the psychological something that differentiates the artist from other men. We are happy in thinking that there are many excellent architects to-day who are also good engineers; and conversely we have believed in the existence of engineers with artistic sympathies. But a letter, appearing in "The Times" over the signature M.Inst.C.E., gives us pause in the latter belief. Why repair and reinforce the old woodwork in Westminster Hall, asks this gentleman, when an entirely new roof could be erected for much less than the £60,000 asked for, and "the result would be more satisfactory"? The naïve conclusion of the writer is that "an important matter of this kind ought to be referred to an engineer having far more knowledge of this special work than can reasonably be expected from an architect whose training and experience have been gained in ordinary architecture." Here we get the purely engineering standpoint, and a fearsome thing it is. The correspondent, however, might have found an answer to his own question had he asked himself why a respectable body of Commissioners had not anticipated his exceedingly "practical" idea, and given their orders to a timber merchant straight away.

The Prince's First Foundation Stone.

LAST Saturday week the Prince of Wales laid his first foundation-stone, that of the church of St. Anselm, Kennington Cross, which is within the borders of the South London estates of the Duchy of Cornwall. Very gracefully he did it, and the slight symptoms of nervousness he betrayed endeared him at once to all beholders. The Prince, after smoothing the mortar with the silver-gilt trowel handed to him by Professor Adshead (who had specially designed it), tapped the stone with the mallet tendered by the contractor, Mr. Roberts; tested it for truth with the level proffered by a church official and with the square adjusted by Mr. Ramsey (Professor Adshead's partner), made the customary solemn declaration, and the first part of what must have been for him a somewhat trying ordeal was over. But then he had to listen to an address and make a speech in reply to it. An excellent speech it was, and we cannot refrain from quoting this charmingly modest passage from it: "At present I cannot pretend to much knowledge of the difficulties which beset housing reform, but by studying the comfort and happiness of my tenants I hope to gain experience." Spoken like a prince!

Brightening the House-Front.

AN expert contributor on decoration advocates, in a later page of the present issue, the use of brighter colours in painting the woodwork of the fronts of town houses. His advice is no doubt based on observation of actual results; for it has been anticipated in the decoration of many fine old houses in the West End of London. Modern paints are of exquisite colour and texture, and they weather so well that there is no reason why they should not be used for the adornment of the house-front. Doors and sashes must be painted; and there is no reason why they should be made drab and dingy. Some of the brightly tinted enamel-finished doors in and about Smith Square, Westminster, for instance, are a charming incentive to the furtherance of this practice.

Sir John James Burnet.

OF all the names appearing in the long list of birthday honours that was published on Monday, that of Mr. John J. Burnet, LL.D., R.S.A., F.R.I.B.A., who receives a knighthood, is the only one that possesses direct interest from the architectural point of view. Biographical particulars of Dr. Burnet having been given, together with an excellent portrait, so recently as in our issue of May 13, on the occasion of the opening by King George of the British Museum Extension, there is now no need to do more than recall that the new knight was born in 1859, studied at th Ecole des Beaux-Arts from 1874 to 1877, and is th architect of the Royal Institute of Fine Arts, Glasgo (1881), the offices of the Clyde Navigation Trust (1886) the Glasgow Athenæum (1889); Deanston House Doune (1883); many churches; the head offices of th Union Bank of Scotland; and, more recently, of man important buildings in London, including, besides th British Museum Extension, the new offices of th General Accident, Fire, and Life Assurance Corporation in Aldwych, and the Kodak Company's premise in Kingsway. Hearty congratulations to Sir Joh James Burnet!

THE PLATES.

LITTLE needs to be said by way of introduction t the Plates we publish this week. They ar rather more cosmopolitan in flavour than usual We would draw special attention to the fine sectio of Poelaert's Palais de Justice, to the Classica elevation of the new Théâtre des Champs Elysées, an to the masterly detail of a Corinthian capital by M Emmanuel Brune.

Monumental Architecture. XXIII.—The Hall o Fame, Munich. Leo von Klenze, Architect. Th Ruhmeshalle, to give it its Bavarian title, was buil for the housing of statues and busts of Bavaria notabilities. The colossal bronze statue in the foreground represents Bavaria, and was executed b Schwanthaler. It is 62 feet in height. The buildin was finished in 1853.

Théâtre des Champs Elysées. A. and G. Perre Architects. An article on this building appears o p. 444; plans are given on p. 445. Two of our plate show, respectively, the elevation of the building an the proscenium of the larger of the two theatres; fo there is a comedy house as well as a theatre for th lyrical drama. A return to strict sobriety of design, a well as to chastity of decoration, is signalised by thi much-discussed building, which represents a revulsio from the excessive sumptuosity that had reached it climax in playhouses and music halls. As we hav from time to time had the pleasure of recording, ou own more recent theatre architecture is showing similar return to sanity, and the outstanding exampl of the Elysées should do much to encourage the movement.

Small Houses of the Late Georgian Period. XII —Cottages at Giggshill Green, near Esher, Surrey Much of the charm of these cottages depends on th colouring of the warm red roof of rough hand-mad tiles contrasting against the white upper storey wit its base of pleasant-coloured stock bricks. There is simple formality about the composition which is mos engaging, and the Gothic-headed windows, brough into sympathy with the general character of the desig by the enclosing semi-circular arches, though somewha daring in idea, are a very distinct factor in the peculia character of the whole. The trellis porch on the righ is a modern addition, and would be better omitted.

Chart of Town Planning Procedure for Owners Schemes, to be Adopted by Local Authorities: Stage III.

Students' Drawings. XXI.—Corinthian Capital Temple of Castor and Pollux, at Cora. By Emmanue Brune. The beauty of a Corinthian capital has rarely been better pictured than in this drawing, the richness and strength of the modelling being realised to the full The original is in the gallery of the Massachusetts Institute of Technology.

The Palais de Justice, Brussels. IV.—Section J. Poelaert, Architect. One of the most interesting of the remarkably fine series of drawings of the Palais de Justice which we are publishing, this section wil sufficiently explain itself.

HERE AND THERE.

OME time ago I made reference in these
columns to Nonconformist church architecture.
It is not my present intention to traverse the
round again, but the publication of a most readable
tle book on the subject gives occasion for dealing
ith some matters which had escaped my attention.
nd first I may be permitted to observe that there is,
far as I am aware, but one other book on Noncon-
rmist church architecture. We must feel the more
debted to Mr. Ronald P. Jones, therefore, for
athering together the essays which appeared
iginally in the "Inquirer," and here present-
g them in a one-and-sixpenny volume, admir-
bly got up, and illustrated by a representa-
ve, if limited, series of examples. (The book
published by The Lindsey Press, of 5, Essex
treet, Strand, W.C.) Of the five chapters which
mprise the volume, that dealing with Nonconformist
urches of the eighteenth century, and that dealing
ith the best plan and arrangement for the church of
-day, are the most interesting. With regard to the
rmer, it may be pointed out that the appalling
apels erected by third-rate architects of the
ictorian era—the very worst types which the Gothic
evival produced—have entirely withdrawn our
tention from the excellent little buildings in which
onconformity housed itself in Georgian days; and
this account especially Mr. Ronald P. Jones's book
very welcome. It shows us, in particular, two chapels
remarkable interest—Underbank Chapel, Stanning-
n, and Friars' Street Chapel, Ipswich. When we
ok upon these, and then think of the vulgar con-
omerations of architectural scraps which are
rinkled up and down the country, we can realise
hat a huge mistake it was not to carry on the model
re ready to hand. The chapel in Churchgate Street,
ury St. Edmunds, is another very good example, its
bbed brickwork, bold doorway, with oval window
er, calling to mind the work of Wren. It was Wren,
deed, who gave the finest examples of interiors
ited to Nonconformist services; for, though his
ity churches are Episcopalian, they were designed
emphasise the part of the preacher, around whom a
rge congregation could be gathered, as contrasted
ith a service which was liturgical and spectacular. It
es not come within my province to discuss the merits
demerits of either form: suffice it to say that Non-
nformity has formulated distinct requirements which
ll for their own architectural expression.

* * * *

The author gives us the following description of the
terior of an old Georgian chapel: "The focus of the
tire scheme was the pulpit: even in Wren's churches
e pulpit attains an importance in scale and decoration
ver previously imagined; upon it, and upon the
unding-board, the most ornate carving was lavished,
d the open staircase provided a delicate contrast to
solid panelling; sometimes the whole structure
ite outshines the reredos and Communion table.
t in the chapel it supplanted these features alto-
ther, and the internal design was based in the first
ace on the problem of giving a direct view of the
eacher to as large a congregation as possible. The
lpit was therefore placed in the centre of one of the
nger sides of the building and the pews were
ranged in blocks facing it on the floor space. . . .
he existence of galleries made it necessary that the
lpit, or the top storey if it possessed one, should be
gh enough for the preacher to be seen by those who
t in the back pews upstairs, and this necessity no
ubt led to the development of the 'three-decker.'
he blank wall usually contained a tall window on
ch side of the pulpit and an oval or circular one
above the sounding-board, these being filled in with plain glass in white sash-bars or delicate leading of 'cob-web' design. . . . At night the chapels were lighted by candles, and the fine brass hanging candelabra of Dutch design which still exist at Ipswich and Taunton show how greatly these must have added to the interior effect. . . . The pews were of the high-backed 'loose box' kind: it is said that they sometimes contained stoves and other domestic comforts for their family parties, who were completely shut off from inspection by their neighbours; at Newbury there is an 'infants' pew'—a kind of secluded chapel nursery for the babies of the congregation." That is not exactly an arrangement for a building devoted to religious services which now commends itself to Nonconformists. A great change of attitude towards the form of service has taken place since Georgian days, and a considerable problem confronts the architect.

* * * *

The best type of plan would seem to be an oblong with a central aisle, and passages next the side-walls, with the Communion table at the end of a shallow chancel. Opinions will differ as to where the organ and choir should be placed. As already expressed in these columns, my own view is that the worst possible arrangement is for the organ to fill up the "east" end of the church, and equally fatal is the placing of a large window in this position, with the pulpit in front of it. In this connection one might cite the High Pavement Chapel, Nottingham, where "the enormous chancel window, though in itself a fine piece of Gothic tracery, and filled with beautiful glass by Burne-Jones and Morris, is yet so dazzling as you sit in the body of the chapel that you can hardly see the preacher"; and hardly better is the device whereby the pulpit forms part of the organ case. For the conditions of a Nonconformist service nothing, to my mind, is better than reverting to the old idea of an organ and choir gallery at the west end. Then, by setting the Communion table in a shallow chancel, with the pulpit advanced to the front on one side, a very satisfactory result is possible. The abolition of side galleries is imperative—they are destructive of all sense of repose in a church; and pews should be reduced in height to the lowest possible amount. The modern Nonconformist church still puts the preacher in the predominant position, and calls for provision for large congregations who can see and hear him, but these requirements are not really antagonistic to a fitting architectural result. The fact that Nonconformist churches and chapels are generally so very deplorable is due to the poor talents of the architects who have been engaged to design them rather than to the conditions of service.

* * * *

Fluellen's pronouncement, in Henry V., that there is a river in Monmouth and one in Macedon, and salmons in both rivers, serves to remind us that there are well-known places in London and the provinces that bear the same names. Compare, for instance, Manchester, Liverpool, and Glasgow, with London. Manchester has its Piccadilly, its Haymarket, its Cheapside, its Oxford Street, and Regent Street; Paddington is an ecclesiastical parish of Salford, and there is at Salford also an Adelphi Terrace. At Liverpool you may walk down Park Lane and St. James's Street and Whitechapel. At Glasgow you will find a Charing Cross (with its Grand Hotel), a Richmond Park, and, if not a Piccadilly, at least a Piccadilly Street. It reminds one of the Canadian who said serenely on his arrival here: "So you have a London, Middlesex, too."

UBIQUE.

MODERN ARCHITECTS:—IV. LEO VON KLENZE.

SPECIALLY CONTRIBUTED BY A. TRYSTAN EDWARDS, M.A.

(Continued from p. 427.)

PEOPLE often say that artists should not attempt to write about their work, because they nearly always make fools of themselves. This is true of nine artists out of ten, but it is not true of great artists, for great artists are not likely to make fools of themselves, even when they venture to employ the written word.

It may be of interest if we quote a few sentences from a selection of Von Klenze's aphorisms on the subject of architecture. He held that it is only possible to arrive at correct conclusions upon æsthetics by means of linguistic expression. Literature, although it can never be a substitute for the visual arts, yet embraces them all, for works of art are the product of thought, and thought does not come to maturity until it has been enshrined in language. Von Klenze tells us that "At all times artists have felt compelled to express their ideals in writings, which, in so far as they were sincere and truthful, guided them along the difficult path of their art." His dicta are in dogmatic form; he raises the standard of Classicism, but he does not condescend to argue concerning the basis of his opinions, which, however, are not on that account unworthy of consideration. "There has been and is and will be," he says, "only one art of architecture—namely, that which had its climax in the Greek historical and cultural epoch."

"Before this climax was ever reached many efforts had to precede it, the results of which were partly destroyed by the ravages of time or of vandalism. Yet much that was excellent was left, and there were many styles before and after the only style which may be considered to be architecture proper. Every style which has attained to a religious, national, or technical excellence is charming and has a conditional value, but none but architecture embodying Greek principles possesses beauty, character, and general utility."

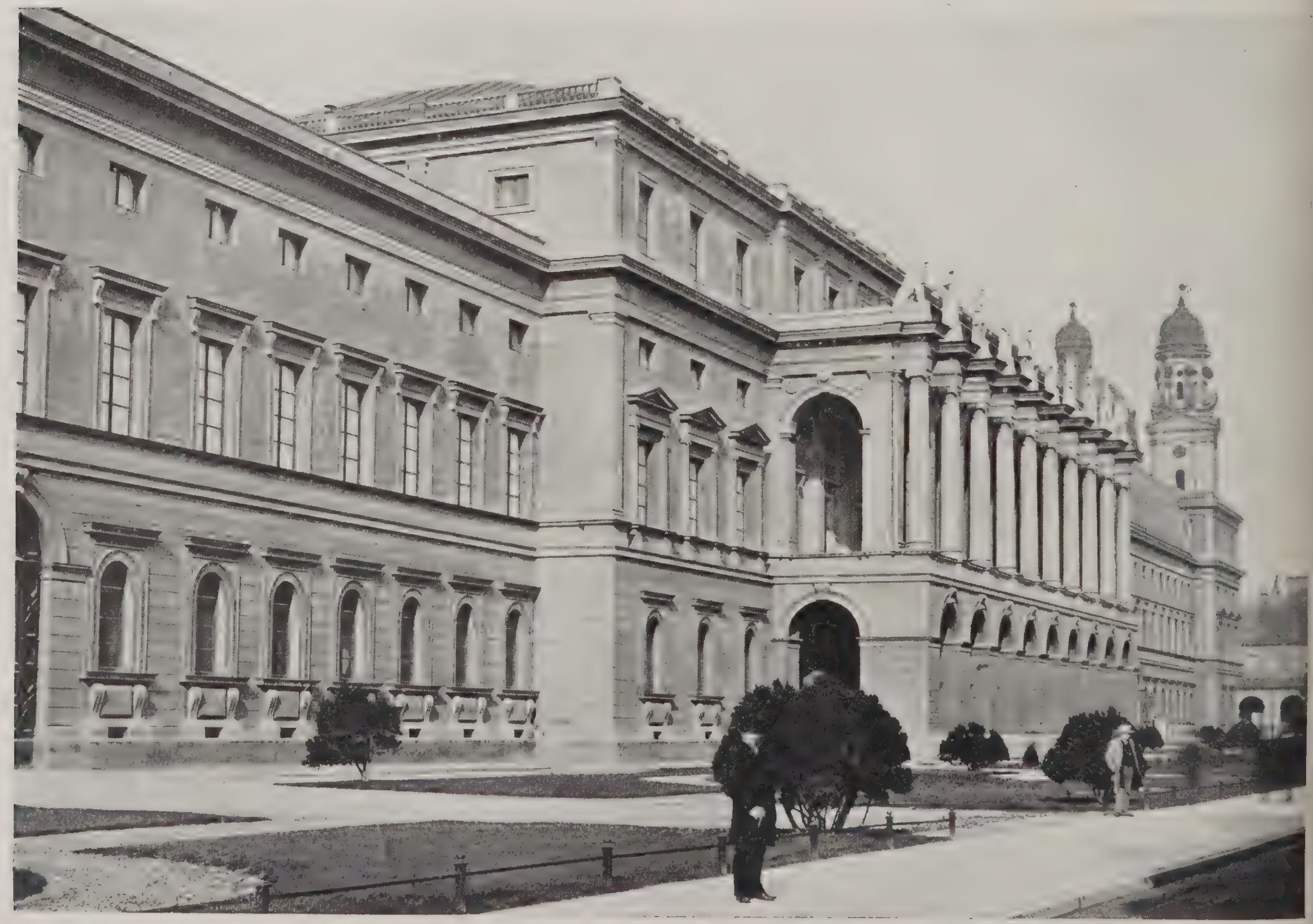
"Greek architecture, in the limited sense of the word, has two chief periods of development: in the first only horizontal roofings of openings and spaces were known; in the second the arch form was invented and used."

"If we have grasped the principles of this two-fold development of Greek architecture, and if we keep our eye fixed during all our criticisms of modern buildings upon the precious remains in Greece itself and in the Roman cities (without limiting ourselves to the slavish imitations of these remains), then Greek architecture can and must be the architecture of the world and of all time, and not climate nor material nor difference of custom can be urged against its universal adoption."

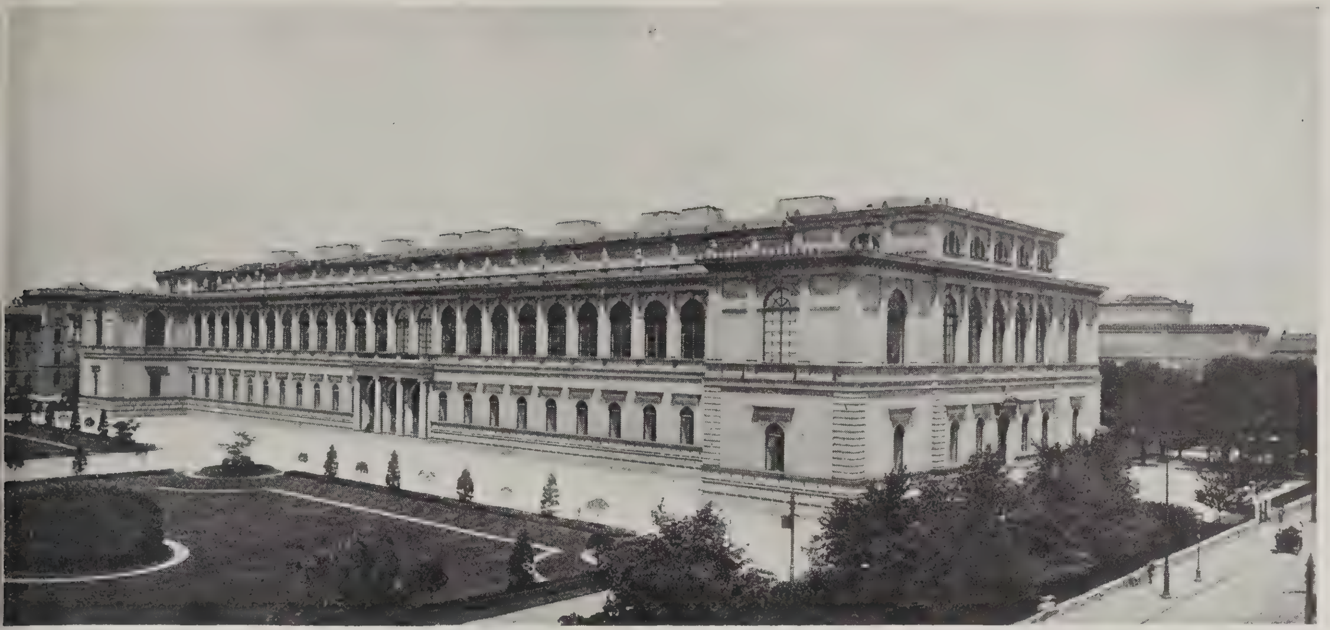
"Although the arch has been considered only in the technical and structural sense as a necessary evil, its use offers in other respects such great and manifold advantages, and is so intimately associated with our necessities, habits, and ideas, that there can be no question of its discontinuance."

"Here the way has been shown to us by the Romans and by the Italians of the fifteenth and sixteenth centuries, who so fortunately repudiated the artistic barbarism of their immediate predecessors."

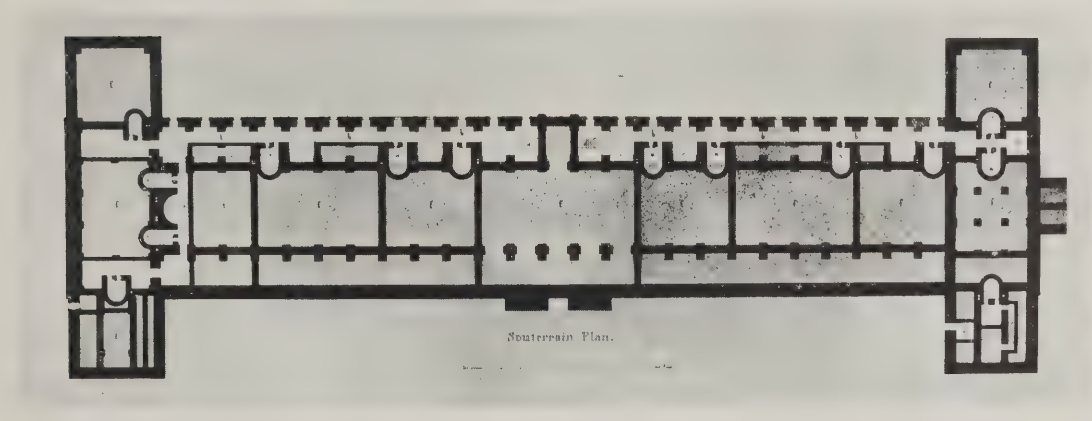
"But the history of art, as that of the world, goes



ROYAL RESIDENCE, MUNICH. VON KLENZE, ARCHITECT.



THE OLD PINAKOTHEK, MUNICH. VON KLENZE, ARCHITECT.



THE OLD PINAKOTHEK, MUNICH: PLAN.

way step by step, and thus the architects of the naissance, emerging from the Middle Age, that riod of sorrow and tribulation, could not at once tore their art to its former status; but their efforts re highly praiseworthy, especially when we consider at they were surrounded by the ruins of the later and rse Roman architecture, and were only cognisant of less homogeneous parts of these."

"The architectural misdemeanours of Buonarotti, recklessness of Giulio Romano, Maderno, and rromini, the absurdities which reached their climax the age of Louis XV., and, lastly, the senseless and ritless imitations of solitary Greek forms in modern es, do not represent any architectural advance since fifteenth century. To the artists of the present y, therefore, an important task remains. a task which y are all the more fitted to perform because they are w familiar with the art and literature of ancient eece."

'Excellent men of all nations have already taken rt in this work of reconstruction, and we, too, have oured for that end. In no spirit of arrogance, but with profound conviction. we have sought to oppose mechanical application of the teachings of Vitruvius d Vignola and the groundless theories of modern -scribblers; and we have not hesitated to point out vulgarity of those who see in architecture only a ans to protect themselves in a cheap way against t, heat, and cold."

Too often it happens that when a writer sees as clearly and feels as strongly as Von Klenze saw and felt, we get the swashbuckling style which resolves itself into mere sound and fury, signifying nothing. But Von Klenze, with all his strength, knew how to "use all gently"; and this is a manifesto in which vigour and moderation are harmoniously combined. It may be noted that he includes in the phrase "Greek architecture" both trabeated and arcuated forms. A Greek Revival such as Alexander Thomson tried to initiate, in which the mighty achievements of the Romans were entirely ignored, was doomed to failure from the first. But it may be asked why the word "Greek" should be made to denote a manner of building differing in so many important respects from that which had its origin in Celtic soil. This is a question merely of terminology. Von Klenze is here using "Greek" in the same sense as the word "Classic" is commonly employed in modern times. Any building of whatever size or shape in which the Orders appear may be described as Classic; and such a building may be a thoroughly bad composition, and reprehensible in most respects, but it is still characterised by a definite style. Von Klenze was not concerned to defend the abuse of the Orders, as his severe criticism of Michael Angelo and the Baroque architects bears witness, but he insisted rather that the architectural features which the Greeks devised are an eternal necessity, and that it is useless to repudiate them. It must be remarked, however, that the aphorisms which have just been quoted by no means constitute a philosophy of art; for, although they are in accordance with reason, they are not expressive of reason. We have the results of an argument, but the argument itself is not declared. We are not told, for instance, wherein the excellence of Greek architecture consists, nor yet why neither climate nor material "can be urged against its universal adoption." Von Klenze condemns the rules of Vitruvius and Vignola, for he is aware that they are arbitrary and as far divorced as possible from living principles, but he himself does not undertake to supply us with such principles.

Although he does not formulate definite precepts in his writings, it is yet possible that we may discern his philosophy by analysing his executed works; but before we attempt to do this it may be well to consider one other expression of opinion, which may help us to understand his attitude towards architecture. The following quotation is from a letter written to an official at the Royal Institute of British Architects in 1837. After receiving some hospitality from the members of that body during a short sojourn in England, he decided to make them a presentation of a drawing of a peripteral temple which he had executed in Munich Park, and the drawing was accompanied by a description: "This temple, to the best of my knowledge, constitutes the first example of lithochromy in the present day. The stone is calcareous, very hard, of a yellowish white, and almost marble. The site is on a hill in the midst of very lofty trees, which do not, however, reach midway of the columns. The interior forms a semi-circular vault caissoned and likewise painted. The ground of the caissons is alternately red and green, and the ornaments, of a ramified pattern, are painted white upon these grounds. The roof is covered with red-coloured copper; the ornament above is white shining metal, partly grounded with white colours. The whole of the paintings and grounds are executed in the encaustic manner. I cannot tell how justly the execution of this little monument increases and strengthens my conviction that *there is no Classical architecture without the concurrence of colour,* and that such ornament forms an integral and adherent part. Its non-employment places a monument in the category of a landscape drawing in Indian ink opposite one of Claude Lorraine's. Thank heaven this conviction is gaining ground considerably with us. I have already had occasion to construct a great polychrome edifice, a post-office. I am at the present time executing a private mansion of the same kind, and this fine taste of antiquity is continually spreading."

Here, again, his remarks stop short at the point where they were about to be illuminating. Von Klenze's own practice shows that he did not himself subscribe to the doctrine here set forth, for the majority of his buildings, even of those erected during the last years of his life, when he was designing in the Greek manner, were not embellished by any colour ornament. The fact is that bright colours can rarely be employed with propriety except when one is dealing with a solitary structure. We are often told it is nothing but the Northern light and atmosphere which prevent us from decorating our entablatures with blue, scarlet, and gold. This is not the case. The real cause of our restraint is the presence of large congregations of buildings which cannot form a unity if each individual member is allowed to be the centre of an obtrusive colour scheme. It is one of the limitations of ancient Greek architecture that there is little attempt to conceive of the city as an artistic entity. The Acropolis rock at Athens gives a magnificent emphasis to the chief religious buildings, but the exigencies of the site did not permit of these being arranged in any formal configuration. Each temple was a unit by itself. Von Klenze was fully justified in endowing his solitary monument in Munich Park with the kind of interest which can be derived from a chromatic pattern, but it does not follow therefrom that such a treatment is appropriate when one is dealing with a façade which must take its place as part of a street.

Having quoted Von Klenze's considered judgments concerning architecture, it is necessary for the purpose of this criticism to pass under review such of his chief works as were not discussed in the last article. The picture gallery, of which the plan and front elevation are here illustrated (p. 443), is an imposing structure. The end projections form an admirable termination to the long row of repeated features. The doorway is perhaps rather unfortunately placed, for no provision seems to have been made for it; it appears as if it were an after-thought, for the design of the façade would be quite complete without it.

(*To be continued.*)

THE THÉÂTRE CHAMPS ÉLYSÉES.

SINCE the erection of the Eiffel Tower, no new building in Paris has attracted so much attention, nor provoked so much discussion, as the Théâtre Champs Élysées. Disparaged by some because of its defiance of tradition, it is by others extravagantly praised as marking an epoch in the evolution of architecture; while the chauvinistes have conceived a patriotic prejudice against it because it seems to them to smack too much "of Vienna, of Munich, or even of Düsseldorf." If it is Germanic, it is *ipso facto* unpardonably bad! As a matter of fact, it probably owes most to St. Petersburg and Bordeaux.

M. Paul Guadet, who has described it at considerable length in "L'Architecte," has a whole-hearted admiration for it, and in defending it he offers a gentle remonstrance against the conservatism that habitually jibs at innovation. Architecture, he drily reminds them, is a plastic art; and art is by no means to be regarded as a religion deriving its force from mystic dogmas. Architecture, he declares, is essentially rational; and our delight in the Parthenon is as much a matter of the intellect as our pleasure in the beauty of a dexterously demonstrated mathematical theorem. Architecture, however, must frankly and clearly be expressed in the terms of its time.

It follows that MM. A. and G. Perret, the architects of the Théâtre des Champs Elysées, in the Avenue Montaigne, Paris, in adopting reinforced concrete as the material of construction, were bound, as true artists, to work sympathetically in a comparatively unfamiliar medium. It is this fidelity to æsthetic principle which has, on the one hand, rather scandalised the conservatives, and, on the other hand, has won the lavish admiration of the more progressive spirits. M. Paul Guadet evidently believes that, being almost compelled to abandon the redundancies of decorative effect which had supervened upon older systems of construction, the architects have triumphantly vindicated the dignity of simplicity; and while he is careful to say that it would be rash to pass definite judgment on work that time alone can "consecrate," he nevertheless ventures to affirm that this building is "the most interesting, the most courageously imagined, and the most successful," that the new century has yet seen—"its conception," he says, "is in harmony with the rules of a sane and rational æsthetic."

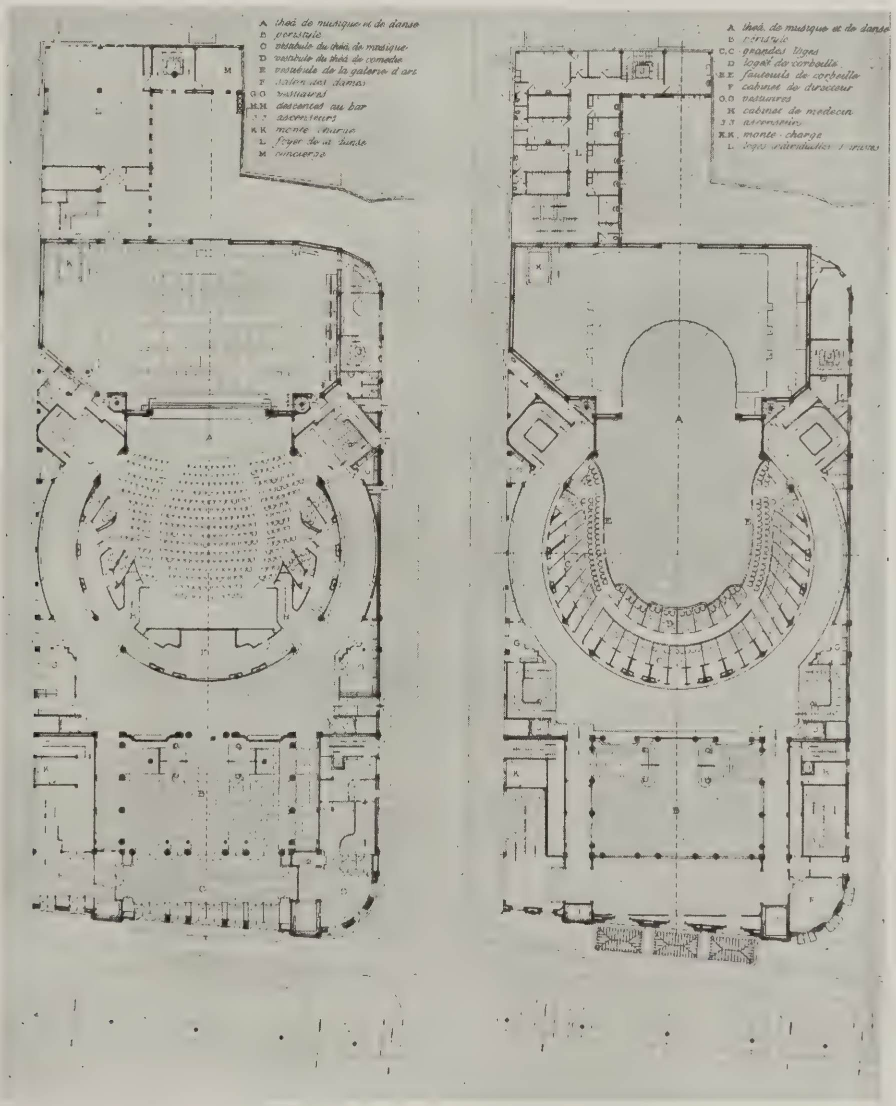
The simplicity of the building is in harmony with the main object of its projectors, who sought to create a suitable home for a purer and more severely restrained expression of musical and choreographic art. Lyrical drama, and even tragedy, are to be cultivated with more austerity; mere concerts and ballets, and, generally, the less serious forms of lyrical art, are to e severely avoided. What was required, therefore, as not a luxurious rendezvous for fashion, but "a nctuary of phonetic art."

Two distinguished graduates of the Ecole des eaux-Arts, the brothers A. and G. Perret, were trusted with the delicate task of expressing these rer ideals architecturally; and they have had the sistance of a Belgian architect, M. Van de Velde, in heming the decorations; and of M. Milon, engineer, r the electrical and mechanical installations; while M. de Tedesco and Kœchlin were called in as inforced-concrete specialists.

The building comprises two theatres and an art llery; the smaller theatre being reserved for repre- ntations of comedy, and the larger for lyrical drama. M. Guadet lays stress on the "noble simplicity" of e design, and on the "unity of aspect" of its main atures. That is to say, there is no straining after fect. Such beauty as the front possesses is organic, sults from just proportions, harmony of parts, well- lanced composition.

The form chosen for the auditorium of the principal eatre is that of a perfect circle, about 85 ft. in ameter, the balconies of course conforming to the an of the pit. The acoustics are said to be extraordinarily good, as the result of a careful scientific study of this particular problem. The interior decorations are chastely beautiful, and several artists of eminence have been employed upon the frescoes, some of which were not painted *in situ*, but in the artists' studios, upon slabs of concrete which were placed in position after the artist had wrought upon them—a great convenience to the artist, but hardly yielding the happiest results.

[We are indebted to our Paris contemporary, "L'Architecte," for the accompanying illustrations, which include two plates, one showing the elevation, and the other the charming proscenium—on which, however, the organ-pipes seem somewhat intrusive, as well as being a sort of mockery of music, seeing that they are dumb. Most of the decorative painting was done by M. Maurice Denis (Orpheus and Apollo motives), Mme. Jacqueline Marval (Daphnis and Chloe legend), and M. K.-X. Roussel (Fête Dionysiaque). MM. Vuillart, Lebrusque, and Sem have also done excellent decorative designs, the last-named being the well-known caricaturist, who has some characteristic figures in the refreshment-bar. Further reference to the plates is made on p. 440.]



THÉÂTRE CHAMPS ÉLYSÉES, PARIS: PLANS.

A. AND G. PERRET, ARCHITECTS.

"ELIMINATING THE CONTRACTOR."

VIEWS OF LEADING ARCHITECTS.

FOLLOWING the announcement that the Theosophical Society had arranged to complete, by employing direct labour, their new building in Tavistock Square, there was much discussion in the general Press of the old and preposterous question of whether it would be advantageous, or the reverse, to eliminate the contractor from building operations generally. As the discussion—and, indeed, the mere revival of the question—revealed an astonishing amount of misconception, we felt that it would be rendering a public service to obtain an authoritative pronouncement on the subject by those who are in the best position to make it. Accordingly, we approached a few of our leading architects, who, while occupying a strictly impartial attitude as between the contractor and the public, are manifestly in the best possible position to take observation and form just conclusions on the chief points that had arisen out of the Tavistock Square incident of the London building trade dispute. From the replies received we can this week give only the following brief selection, but hope to find room for more next week; for while their general tenour was a foregone conclusion—namely, that the question of eliminating the contractor is little short of absurd—it is extremely interesting to note the varying methods by which (with one doubtful exception) this conclusion is reached:—

Sir Ernest George, A.R.A., Past-President R.I.B.A., writes:—

Without questioning the scheme adopted in one or two important London buildings to meet the present deadlock, I feel that any general elimination of the contractor would be detrimental to the building owner, to the architect, and to the building.

The architect's cares and responsibilities would be immensely increased, and while conducting the business operations he would have little time for the thoughtful study of his design.

In the absence of a master builder there would probably be delays from want of forethought, leading to waste of time and increased cost.

Management, the purchase of material, and the use of workshops and machinery would have to be entrusted to a highly paid foreman or clerk of works, and it would be throwing on such an one great responsibility, while putting in his way temptations in the use of large sums of money.

In works that are tendered for in keen competition, with quantities supplied, the contractor can have but a small margin of profit for the part that he plays, while taking all risks.

In the absence of the builder, the architect would find himself mixed up with financial transactions, of which it is of the first importance he should stand clear.

Mr. Arthur Blomfield, M.A., F.R.I.B.A., writes:—

I have not had the time to consider the direct-labour system sufficiently deeply for my opinions on the subject to carry any weight, but I am prepared to go as far as to say that anything which increases the burden of responsibility on the architect's shoulders beyond the intolerable degree which it has now reached will cause many of us to consider seriously whether it is a profession worth following at all.

Mr. Beresford Pite, F.R.I.B.A., writes:—

In reply to your inquiry, whether the elimination of the contractor is possible, and whether the direct-labour system is likely to prove advantageous to the architect, I can only venture opinions based upon ideas rather than upon experience.

I think it quite unlikely that here at home, in London, any system is likely to be more advantageous to the architect or to the promoter of buildings than that of having a good contractor—that is, a good builder who understands and enjoys doing first-class work. Good materials, good workmanship, good organisation, and regularity in dealing with cost are thus, here and now, supplied without serious anxiety by numbers of first-rate firms for the benefit of architects and employers. The pleasant experience of conducting building operations with a good contractor has often been mine—I may almost say always—and I cannot imagine easily how direct employment and direct purchase of materials and direct dealing with costs would better the present system. Certainty, within reasonable limits, as to cost and times and methods of execution are essential to ordinary building operations, and these qualities are practically secured by the responsible contractor in a way which the direct system of employment cannot assume to do.

Ideally profit-sharing upon each contract as between capital and labour is desirable, and I believe practicable, and a hopeful solution of much unrest.

Mr. Hastwell Grayson, M.A., F.R.I.B.A., President of Liverpool Architectural Society, writes:—

On several occasions for country work, and once for a town job, I have dispensed with a general contractor. Under certain circumstances by eliminating the contractor, there may actually be a gain in economy, but this is only possible with a very businesslike clerk of works, who is equal to a great deal of correspondence and time-keeping, and a building owner who is constantly at hand, who can keep the clerk of works up to the mark, and does not mind writing endless letters and cheques. Each of my country experiments was fairly successful. The town job was a case where a builder went bankrupt. It was decided to let out the joinery, plumbing, etc., and to finish off the brickwork and drainage by direct labour. A gable fell, and the accident could not have happened if the clerk of works had been about the building; but it was a Saturday, and he had to spend all morning making out and checking a wages sheet. I therefore feel that the elimination of a general contractor must increase the responsibilities of everyone concerned, and that the advantages are almost entirely theoretical.

Offhand I should say there has been less unrest during the last few years in the building trade than in any other of the organised trades. The men, besides gaining certain privileges, have enjoyed a considerable rise in wages. There is some room for further rises if only there could be a reasonable levelling up of the average day's work. The need for greater efficiency is still deplorable.

Mr. Edwin Gunn, A.R.I.B.A., writes:—

"I am in full agreement with the views of Mr. Querrell as communicated to you and published in your last issue. Short of the adoption of the North-Country system, of which I have no experience, an enlargement of the present sub-contract system with extension on co-operative lines, as suggested in the leading article published in your issue of February 11 last, appears to me to offer the most hopeful solution of the constantly recurring unrest. I would reply to your direct question as follows: The co-ordination must be done by someone. If not by a "general contractor" it must be by the architect. If he is a busy man he will have to depute it. I believe workmanship might improve—or rather the better class of workmen would more often be sought after—but cost and duration of works must become more uncertain.

CORRESPONDENCE.

*e Editors disclaim all responsibility for the statements made or opinions
ressed by correspondents, who are asked to be brief, and to write on one side
only of the paper.*

R.I.B.A. Elections.

o the Editors of THE ARCHITECTS' AND BUILDERS'
JOURNAL.

SIRS,—In your issue of the 17th you refer to the
leplorably apathetic gentlemen" who do not vote in
e R.I.B.A. elections.

As one of these, perhaps one may point out a very
vious reason—we do not know the views of those for
nom we are asked to vote.

If the gentlemen who put their names forward for
ection would state plainly what they stand for, fewer
ting papers would find their way to the office waste-
per basket.

A DEPLORABLE.

The Proposed R.I.B.A. Charter.

o the Editors of THE ARCHITECTS' AND BUILDERS'
JOURNAL.

SIRS,—The proposed Charter is obviously a serious
atter for the architectural profession, both in the
esent and in the future, and I should be glad to be
lowed space for a brief criticism of the proposals in
ese two aspects.

If the present generation of architects is to be regis-
red, it seems to be agreed that registration must be
en to *all* who have practised or acted as assistants
r a certain period. Architectural practice cannot be
defined as to exclude a man who has occasionally
signed some unimportant bit of building, but whose
al profession, if he has one, is that of house agent,
d agent, or something still more remote from
chitecture. Registration will hall-mark these men
architects, and they will probably be found as
merous as old-age pensioners in Ireland.

" Registered " architect cannot therefore, for the time
ing, be made a title of much distinction. If, as pro-
sed, Fellows and Associates of the Institute are with-
awn and given the separate name of " Chartered "
rchitects, it is obvious that there will be too large a
oportion of men who are not really architects
nongst those entitled to be " registered."

The name will imply very dubious qualifications,
d all competent architects will, in self-defence,
ject it.

The title of " Chartered " Architects will kill regis-
ation; it will do more; it will leave a very bitter
eling amongst the Licentiates. The Institute will
ve taken their guineas and their numerical support
d will then have slammed the door in their face.

The outlook for the future is even worse than for
present.

The Institute apparently designs for its members a
ivileged position, with a special name and an
itrary power of excluding other architects, however
mpetent.

The special name is intended to confer some sort of
nopoly by suggesting to the public that those who
ar it are superior as architects to those who do not.

It may succeed, and then (if history is worth
ading) the privileged body will grow stiff and unre-
otive, and, as academic atrophy and jealousy set in,
ll exclude all who show signs of thinking for them-
ves and will stifle British architecture.

It may fail, and then the Institute will have suffered
leserved rebuff, and architects will have lost a centre
ere common ideals might have been focussed and
common interests of the profession promoted.

If architects are to be officially graded in two classes
difference of class ought surely to be based on a
ference of capacity. In the public interest and in
interest of architecture, it ought not to depend on
membership of any particular club nor on the signing of any unspecified "declaration." Any man who can pass a definite purely technical test ought to be able to demand as a right the full diploma, and the fees ought to be fixed at cost price.

Justice is firm ground to build a scheme on, and for architecture's sake let the foundation be free from all suspicion of unfairness or illiberality.

FERRERS.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—The letter of Mr. Cecil H. Perkins appearing in the issue of THE ARCHITECTS' AND BUILDERS' JOURNAL of June 10, 1914, contains remarks which had better been left unwritten, as no good can possibly accrue therefrom.

Matters relating to the contravention of the signed statements made by members and Licentiates before their admission to the R.I.B.A. are fully provided for in the bye-laws of the Institute, and should be brought to the notice of the Council of the R.I.B.A. through the proper channel. They should have no place in the correspondence columns of the technical Press.

It is felt that architects outside the corporate membership cannot put forward their views to the R.I.B.A. with reference to the proposals in the new Charter which concerns them. But why not adopt a method often resorted to by educational and municipal authorities and convene a conference?

If this suggestion appeals to those interested it might be well to approach the President and Council of the R.I.B.A. as to the advisability of arranging such a conference, at which all classes would be represented, to discuss the proposals and to pass a resolution for the consideration of the R.I.B.A.

FRANCIS R. TAYLOR.

To the Editors of THE ARCHITECTS' AND BUILDERS' JOURNAL.

SIRS,—There appears to be some misapprehension on the part of a number of the Associates of the Institute as to the Council's attitude in regard to those architects who are not corporate members. The Council has suggested representation in larger measure for its own members than for architects outside its ranks. This should surely appeal to both Fellows and Associates as being a wise policy. It is clearly the aim of the R.I.B.A. to ensure to its corporate members privileges which are not available to those who for one reason or another have not considered it worth while to submit to the test of a qualifying examination. Notwithstanding this, Mr. Topley, who presumably spoke on behalf of a large body of Associates, made the amazing statement before the R.I.B.A. that he was prepared to agree to proportionate representation, even though such a course involved three times as many outsiders as members being on the Council. The President emphasised the serious nature of Mr. Topley's undertaking before the vote was taken. It is inconceivable that such a course as this will receive the support of the majority of the Associates.

With regard to the class of Licentiates, this is not, as some members seem to think, permanent, but one that is rapidly diminishing in numbers. It is open to every Licentiate to become by examination a corporate member of the Institute, and it seems to me that any measure should be discouraged which would tend to relieve the Licentiate, or, for that matter, any architect from the necessity of passing a qualifying examination before being permitted to have a voice in the councils of the R.I.B.A.

SYDNEY TATCHELL.

[Many interesting letters are unavoidably held over.]

PRACTICAL POINTS IN PAINTING AND DECORATING.

SPECIALLY CONTRIBUTED BY ARTHUR SEYMOUR JENNINGS, F.I.B.D.

Flat Wall-Finishes.

Considerable attention is being given just now to a new class of paint known generally as "flat wall-finishes," and several inquiries have been received as to their merits and how they differ from washable distemper or water paints, and also from flat enamel. It is perhaps hardly correct to term the finishes referred to "new," because at least two brands, and probably more, have been sold in this country for several years past, but recently many of the largest firms of paint manufacturers have brought out similar paints, and there is every indication that this class of material will be largely used in future. Flat wall-finishes may be described as being midway between washable distempers and flat enamels. In many cases they are made on a base of lithopone, although zinc oxide and other materials give even better results. The growing popularity of these finishes is due to three facts: First, they are easily applied; secondly, they give a very soft, perfectly flat surface, quite free from sheen; and, thirdly, in a very short time they become really washable and may be scrubbed with soap and water. The coat is thinner than a single coat of distemper, washable or otherwise, and hence they may be used with advantage for ceilings, cornices, and relief ornaments generally, as they assist in preserving the sharpness of the outline. These flat finishes are made in a large variety of pleasing tints, and if properly selected they may be arranged to give very excellent decorative effect.

Plain and Mottled Wall Surfaces.

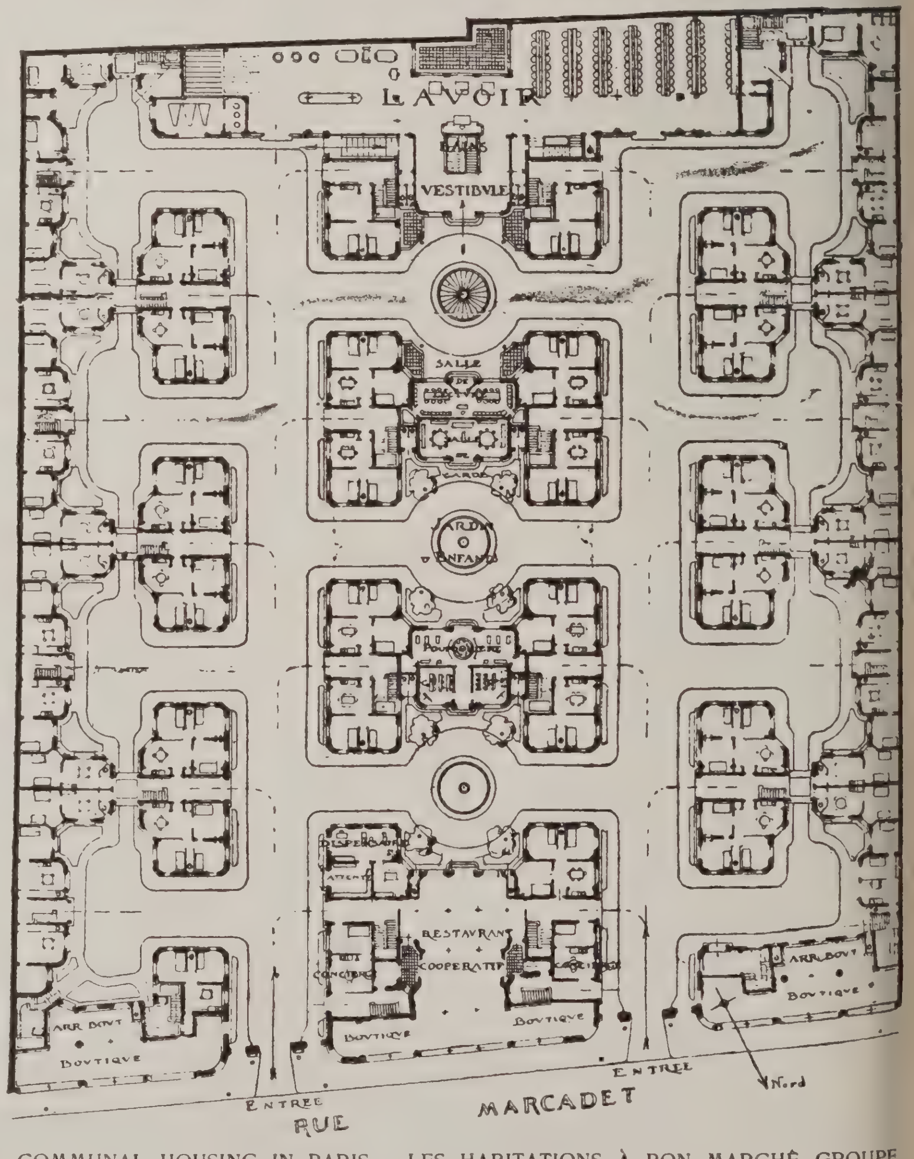
Flat surfaces in decoration are often objected to merely because of their uniformity, and it is true that while a plain finish to a wall must always be pleasing in affording a suitable background for pictures and furniture, yet the solidity and uniformity give a certain stiff and rigid appearance which is not quite "comfortable." There are, of course, several ways in which this rigidity may be overcome; the first is to obtain a mottled surface by adding to the distemper or other material a very little of another colour here and there. For example, a warm biscuit colour may be lightened or darkened in blended patches, so to speak, by merely dipping the tips of the brush in another colour. The painting will require some skill in order to avoid actual patches, and the work may be stippled to assist in this direction. The second way is to go over the work with a tool like that used by grainers, which is known as an "overgrainer" or "check roller." This gives a number of thin broken lines when passed over grainers' work, and yields the appearance of certain marks in the natural wood which it is intended to imitate. A similar tool could be employed on distempered or a flat wall surface, and would be found to have a marked effect in toning the appearance and giving an effect more like that produced by using a textile. Instead of lines, a series of dots or dashes, and dots or even very small circles, diamonds, and other shapes could be used; but in any case they would have to be very small. The colour would be somewhat darker than the ground if the effect required was solely that of rendering the surface less glaring than it would otherwise be.

Brightening Up the House-Front.

Many old houses in London and elsewhere which have a very sombre appearance are rendered at least somewhat attractive by a brightening up of the sash-frames, or in some cases the sashes themselves, with white paint or enamel, and particularly by finishing the front door with some bright colour, such as a subdued crimson, peacock-blue, or myrtle green. The door should be taken off its hinges and a temporary one put in its place. The old door should then be taken to a workshop where dust is as far as possible excluded. If the paint were in a bad condition, cracked, or blistered it should be stripped off with neutral paint remover and then given three or four coats of finely ground paint, which must be well rubbed down to a level surface as the work proceeds. A final coat of flat colour is then given. If the finish required is to be peacock-blue, zinc oxide and ultramarine should be used for the undercoat, and this should be glazed with emerald-green. The glaze is a thin coat of a more or less transparent colour, used as a final finish. Another way of doing the work is to use zinc oxide and Prussian blue and to glaze with cobalt. If a bright red like begonia is wanted the paint would be made of white lead, vermilion, and Prussian blue, glazed with brown madder lake. A myrtle-green is produced in the same way as peacock-blue, with a variation in the respective amounts of materials. Some very pretty browns—for instance, a nut-brown—can be made by using Venetian-red, lemon chrome, and white lead, glazing with burnt sienna.

The paint work being completed, the next thing to do is to apply two coats of the best "front-door varnish," which is a quality specially made to withstand the wear-and-tear of such a position and the glare of the sun. The first coat will be carefully rubbed down with pumice-stone and water, all trace of the pumice being carefully washed off before the final coat of varnish is given. In order to resist the action of strong sun and dust all paint must have linseed oil in its composition. If the finish is varnished it must be slow-drying, otherwise it will not be sufficiently elastic. To keep the door in a really first-class condition it should be washed and rubbed down with soft chamois leather every day—in fact, it should be treated exactly like the body of a high-class automobile.

Sometimes it is desired to finish a front door in a semi-flat, but a flat paint which contains very little oil can never be durable when exposed outside. A semi-flat surface comes within the same category to a certain extent. First-class enamel of the desired colour is very serviceable.



COMMUNAL HOUSING IN PARIS. LES HABITATIONS À BON MARCHÉ, GROUPE MARCADET: GROUND-FLOOR PLAN.

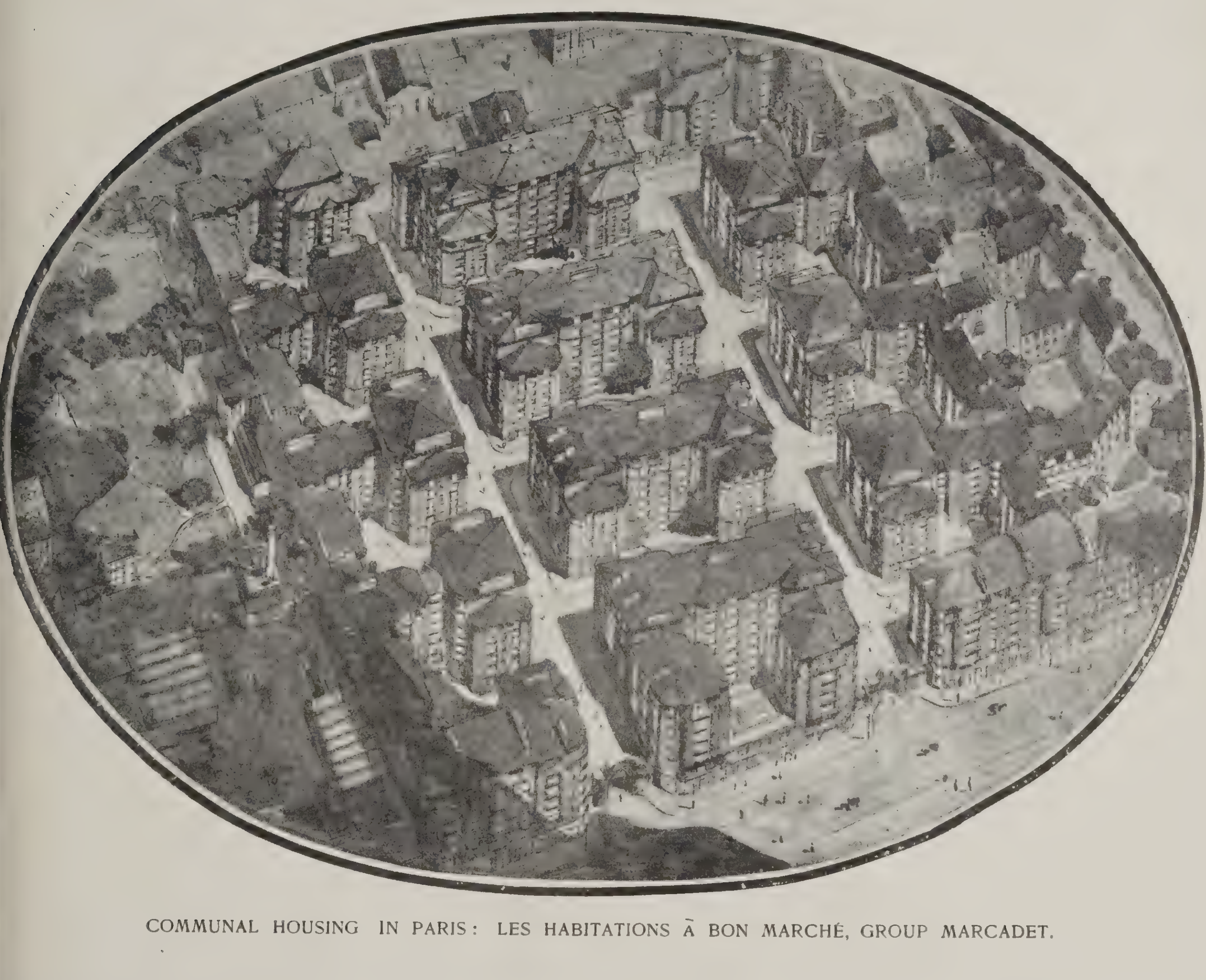
(*See next page.*)

OMMUNAL HOUSING IN PARIS.

In a recent competition held in Paris for e best design for a group of blocks of ts to occupy a site on the Rue Marcadet, e first prize was awarded to MM. Jean ébrard, A. Trevélas, and Félix Bromail. ie perspective and ground-floor plan, ich we are able to reproduce by the courty of the architects, show an extremely genious and interesting scheme. As will seen, the general disposition of the plan mprises a series of detached blocks owing an easy and ample circulation of throughout the entire group, which is arranged that none of the dwellings is olly exposed to the north. The relative ition of the buildings at the sides and in centre should be noted especially. The cks mainly face east and west, and, nks to the width of the communicating rts and the overlapping of the blocks, shown in the plan, the sun's rays can at ie time of the day penetrate to every ck and every flat.

he site is enclosed by walls on three es. The only access to the group of ldings, therefore, is on the fourth side, Rue Marcadet. The width of the site this street is 91 metres. Two wide ets leading out of the Rue Marcadet e access to all the blocks in the compoon.

he buildings on the flanks of the group placed round open courts. The blocks he centre are separated from each other side streets at right angles to the streets ding into the Rue Marcadet. These allow space for circular gardens for the children. The bathrooms are placed between the northern boundary wall and the central block nearest to it. On the other boundary wall would be a line of large shops, in the centre of which would be a restaurant run on co-operative lines; the latter would be a room on the first floor. A library and a dispensary would also form part of the common equipment.



COMMUNAL HOUSING IN PARIS: LES HABITATIONS À BON MARCHÉ, GROUP MARCADET.

The group of buildings, each of which consists of eight storeys, is to include four types of flats, intended for families, as follows:

No 1: A room for the parents, two rooms for children, dining-room, kitchen, and water-closet.

No. 2: The same, but with only one room for children.

No. 3: The same, without a children's room.

No. 4: A room and small kitchen.

As far as possible the flats of the same plan would be grouped about the same staircases. The largest flats would be in the large central blocks, and Types 2, 3, and 4 in the side blocks.

Altogether, the plan provides for 615 flats: Ninety-six of Type 1, 273 of Type 2, 215 of Type 3, and thirty-one of Type 4.

This scheme is one of the most interesting of several that have been designed in a series of competitions of which the results have been from time to time recorded in the *Journal*. Evidently our French friends are at length tackling the housing problem with great thoroughness.

ENQUIRIES ANSWERED.

Cutting Hole Through Wall for Pipe.

S. A. M. (Bucks) writes: "To what extent would an existing wall be weakened by inserting a 4-in. cast-iron branch to pick up existing w.c.? Would the wall be reinstated to normal strength by making good in reinforced concrete? Can you suggest a better method of making good?"

—If a brick wall is carefully perforated for a 4-in. cast-iron pipe to go through, the wall will not be sensibly weakened unless the opening is very near an angle or end of wall, when some of the outer bricks may be displaced and should be reinserted in cement mortar. Reinforced concrete is unsuitable for making good round a pipe hole in a brick wall; anything in the way suggested would strengthen the pipe but not the wall. If it is most important to maintain the maximum strength, the bricks should be cut out and relaid in cement to fit closely against pipe.

HENRY ADAMS.

Pulley Problem.

J. W. D. (Norwich) writes: "A load of 10 tons is suspended from a beam by means of seven pulleys, the end of the rope being firmly attached to the ground. Ignoring the weight of the pulleys, rope, etc., and all friction, what would be the theoretical load on the beam?"

—Omitting friction, weight of rope and pulleys, and resistance of rope to bending, the stress in the rope will be uniformly

10 tons throughout; and as each pulley attached to the beam supports a fold of the rope on each side, the total load on the beam will be 4 (10 × 2) = 80 tons. It may at first seem a surprising result, but it follows as a necessity from the first principles of mechanics. It is really no more wonderful than that Archimedes could have moved the earth if he had a lever long enough and strong enough, a place to pivot it on, and time to do it. Then, again, there is the hydrostatic paradox where a column of water in a $\frac{1}{4}$-in. diameter tube can burst a strong barrel or lift a heavy load.

HENRY ADAMS.

Pricing and Measuring Plastering.

X. H. (Gloucestershire) writes: "(1) A master plasterer is asked to give a price for a quantity of plastering (labour only) to cottages. He goes on the job and is shown the complete specifications for the works. On the front page are 'General Conditions,' which apply to all trades. The particulars referring to the plastering itself are on page 13. He gives in his price on this specification. Are not the clauses given in 'General Conditions' binding for him?

"(2) Are all openings deducted in measuring up plastering (labour only)?

"(3) The specification reads that, with regard to rough-cast, the first coat is to be in cement and to be finished off with white lime rough-cast (chippings). Afterwards this was altered, and the two coats were to be in cement with riddled cinders. Which is the cheaper to execute from a 'labour only' point of view, taking into account the fact that cinders are lighter than chippings and also that they adhere more easily to cement than to lime?

"(4) When measuring cement skirting, are not door openings deducted?"

—(1) If the master plasterer stated in his "price" that it was based upon the specification, then the clauses given as "General Conditions" are probably binding upon him, but if nothing were said in the "price" as to particulars or specifications, then it would be a matter of one man's word against another's as to whether the plasterer had seen the general conditions. It would have been better for the master plasterer to have signed both the plastering section and the general conditions of the specification; as part of a contract the general conditions would not be binding if only the plastering section were so signed.

—(2) The practice varies according to locality. In some places all openings are entirely deducted and no allowance is made for "labour only," in others the small openings are measured as plastering and are considered as equivalent to "labour only"; in other places openings over 100 superficial feet are entirely deducted, and "labour only" allowed for openings under 100 superficial feet. The querist is advised to ascertain and follow the practice of the locality.

—(3) Generally, work in cement requires more labour than work in lime. However, any extra or deduction here will depend on the contract and on the arrangement, if any, made with the master plasterer when the work was altered.

—(4) In some places the openings are not deducted, in others the cement skirting is measured net and the stopped ends are numbered. In both cases the object is to allow for the extra labour caused by the breaks. Follow the practice of the locality.

F. I. C.

SPECIAL LEGAL REPORTS.

Ancient Lights Dispute.

Swaby v. Roberts.

June 12. Chancery Division. Before Mr. Justice Joyce.

This was a motion in an action with regard to an alleged infringement of ancient lights at Louth.

Mr. D. Pollock, for the plaintiff, asked that the motion should be allowed to stand over in order that plaintiff could file evidence in reply to the defendant's affidavits.

Mr. J. G. Wood, for the defendant, said the building complained of was erected to its full height before the writ was issued. Moreover, the plaintiff knew since December last what defendant proposed to do. He contended that it was a case for speedy trial and not for a motion.

The motion was directed to stand over on defendant's statement that nothing further would be done that plaintiff could complain of.

Claim Under Two Building Contracts.

Bellew v. Elliott.

June 13. Official Referees' Court. Before Mr Muir Mackenzie.

This was a claim for £78 15s. 9d., balance of account for "goods sold and delivered and work done" in connection with two building contracts.

Mr. K. J. Mackenzie, instructed by Mr. Atherton Powys, appeared for the plaintiff, and Mr. A. E. Hughes, instructed by Mr. Paul Hildesheim, appeared for the defendant, who pleaded that the charges were not fair and reasonable and that the work was faulty; he also claimed a set-off in respect of alleged overcharges and for work done in laying composition flooring in a conservatory at Shepherd's Hill and the erection of a studio at Rickmansworth.

According to the opening statement of counsel, the plaintiff and defendant were both builders and contractors, the former carrying on business at 16, Highbury Place, and the latter at 63, Queen Victoria Street. They had been acquainted for some twenty years in business, and it was a matter of regret, said counsel, that they should have found it necessary to appeal to the law at last. During the past four years there had been a running account between the parties in relation to work done by the plaintiff for the defendant and by the defendant for the plaintiff. The claim was in respect of two contracts entered into in the autumn of 1913, one for work at 9, Old Bond Street, and the other at 71, Portland Court. The contracts were obtained by the defendant, who passed them over to the plaintiff, and they were entered into in the joint names, although the whole of the work was carried out by the plaintiff. There was no contract between the plaintiff and defendant other than a verbal arrangement. The defendant asked the plaintiff to pay the men their wages and submit the account each week, and this was done The plaintiff also supervised both jobs and charged his work in the account. As to the defence and counterclaim, counsel said that the composition flooring laid by the defendant at Shepherd's Hill had to be taken up by the plaintiff and relaid with tiles. It was said that the plaintiff had agreed to allow defendant 5 per cent. on the contract price for the studio at Rickmansworth, but plaintiff said it was only on profits, and as a matter of fact, owing to the railway strike and other circumstances, there was a small loss on the contract instead of a profit.

Witness said it was agreed that he and defendant should sign the contract jointly, and it was arranged that they should do the work together and share the profits. The profit on the Rickmansworth job, however, only amounted to £3 or £4.

In the course of the evidence for the defence one of the witnesses described the concrete floor of the conservatory which it was alleged was faulty and had to be relaid by plaintiff, for which he claimed. The witness stated generally that the work was carried out properly by the defendant, and he described the composition of the patent material with which the floor was covered. He said that the materials were mixed in the usual way and the floor was left in a satisfactory condition. It would have continued so had it been properly treated afterwards, but it was walked upon before it was properly hard, and water had been allowed to stand upon it, with the result that it was kept soft in places.

At the conclusion of the evidence the Official Referee reserved his judgment.

Trespass and Rights to Light.

Bignall v. Red Hall Picture Palace Co., Ltd.

June 16. Chancery Division. Before Mr. Justice Eve.

This was an action by the owners of High House, Farm Lane, Walham Green, against the defendants, claiming an injunction to restrain the continuance of a trespass or encroachment upon their property by the defendants in the building of a picture theatre on adjoining land. The plaintiffs also complained that the defendants by their acts had infringed the plaintiffs' rights of light and had deprived their buildings of their rights of support. This the defendants denied.

His lordship held that if there had been any trespass by the defendants in putting up their building the work they had done had improved the plaintiffs' property, and the latter had suffered no damage. The action would be dismissed with costs, except that the defendants must carry out certain work to the plaintiffs' wall.

THE R.I.B.A. NEW COUNCIL.

To the brief biographies of members of the newly elected Council of the R.I.B.A. the following should be added:—

Mr. Ernest Richard Eckett-Sutton, F.R.I.B.A., one of the newly elected members of Council of the Institute, was born in 1860, and is the son of Mr. Richard Charles Sutton, architect, to whom he was articled. After supplementary study under Mr. Alfred Waterhouse and Sir Arthur Blomfield, Mr. Eckett-Sutton began practice at Nottingham in 1895. Among the competitions he has won are those for the new churches of St. Helen's, Grindleford, and St. Faith's, North Wilford; a Baptist church and schools, the Gordon Boys' Home, and a new dispensary at Nottingham; and the Free Library, Mansfield. Among the chief works he has executed are: New chancel and north aisle, Dinnington Church: new rectory, Dinnington; memorial church, Gainsborough; Congregational church schools, Bridgford; Congregational Church, Northampton; ball-room at Bestwood, Notts. for his Grace the Duke of St. Albans; Seacroft Hotel, Skegness: girls' school, Lenton; and several warehouses, factories, shops, and offices. He was president of the Nottingham and Derby Architectural Society, 1912-13.

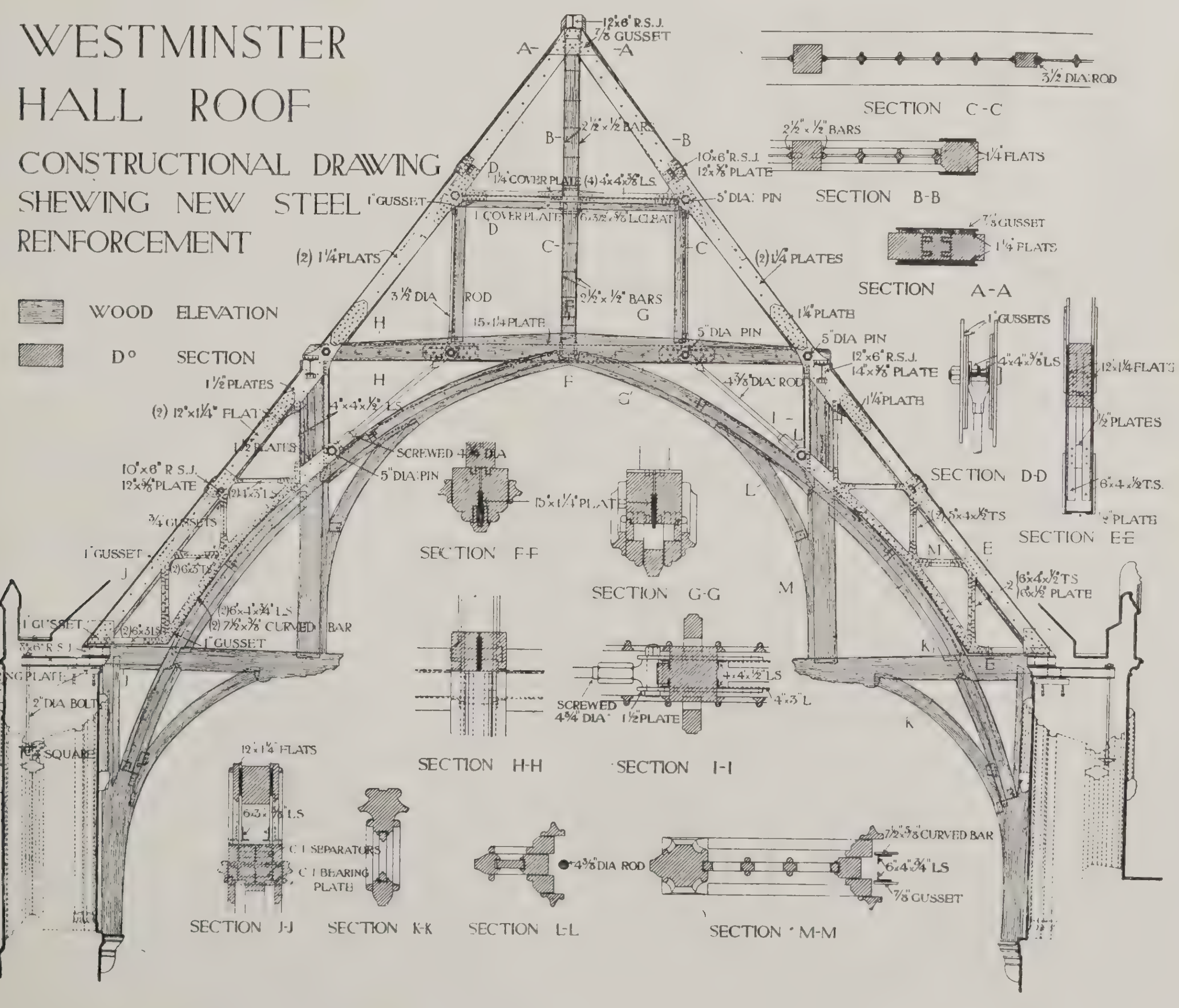
HE REPORT ON WESTMINSTER HALL ROOF TIMBERS.

The report to the First Commissioner of .M. Works, etc., on the condition of the of timbers of Westminster Hall, with ggestions for maintaining the stability the roof, by Mr. F. Baines, M.V.O., has en issued as a Blue-book, and deals with e subject exhaustively and interestingly. begin with, the historical evidence reting to the hall and roof, as far as it has en examined, is summarised by the Chief spector of Ancient Monuments, from idence collected by his department. This followed by a note on the reasons for e recent thorough examination of the of, together with a summary of the prinbles of the roof's construction and a sumé of the calculated loads and stresses on the various members. The question piecing up the timbers with modern oak next examined, proposals are made with gard to the ventilation of the Hall, and ere are admirably clear notes upon the stem of steel reinforcement which, since report was issued, it has been decided carry out instead of the extensive pieceal renovation of the timber which is put ward in the report as the less desirable ernative. The reasons why steel reforcement was given preference are as lows: (*a*) To overcome the necessity for newing the great proportion of the main nstructional and subsidiary timbers; (*b*) strengthen the roof, so that even should decay in the timbers continue as in past there would be no danger of comte collapse such as exists at present. Some cutting and piecing of the defective timbers will, of course, be necessary, and this will have to be done simultaneously with the work of reinforcing the members with steel. Before this can be attempted a carefully designed centre or supporting scaffold will have to be built up from the floor of the hall to carry fully every member of the trusses treated and also the intervening bays. It is proposed to construct this centre of steel members of ordinary commercial sections, and the major portion of it will be erected so that it can be rolled on wheels from one position to another. The difficulties of fixing the centre are very great, as the joints between the main collar beams and the upper principals and hammer posts are so bad, and in some instances so much affected by decay, that if any attempt were made to carry and lift the roof at this point many of the trusses would collapse. Owing to this and other complications, the steel centre has had to be designed to clip and carry each individual member of the truss freely by itself at points where the timber is sound. As other trusses must not be jacked or lifted up in any way whatsoever, it will be necessary to make provision for drawing together the various sections of the reinforcement in the most careful manner before letting the truss sink back on its supports after the reinforcement is fixed. Unless the steel reinforcement is dead tight and true everywhere on the truss it will when actually carrying its load deflect under such load on the removal of the centre, and possibly open many joints in the timber. Although it is intended to reinforce only two trusses at one time and to complete that section of reinforcement throughout, yet to accomplish this the three double ranges of purlins must be reinforced and connected up to the steel reinforcement of the two trusses for three bays. Various suggestions follow for minimising the danger of the operation of reinforcement. The method selected is shown as No. 5 of the drawings, which we reproduce. This, it is thought, meets the four principal requirements in the proposed scheme, viz.: (1) Steelwork designed so as not to prejudice seriously the appearance of the truss and the general amenities of the structure; (2) steelwork adequate not only to carry effectually the weight of the trusses, but to support each main member so that it can be filled up where decayed; (3) steelwork designed so that too great a thrusting stress is not transferred to the walls; (4) possibility of collapse in any of the trusses has to be provided against.

The estimated expenditure on the works proposed amounts to £60,015—a surprisingly large sum; but the work is beset with difficulties.

Marylebone's New Town Hall.

The laying of the foundation of the new Marylebone Town Hall in Marylebone Road (nearly opposite the Hotel Great Central) is to be the occasion of a Royal ceremony. At a meeting of the Marylebone Borough Council the Mayor made the announcement that H.R.H. the Princess Royal had graciously consented to lay the foundation stone of the new municipal buildings on July 8 at 3 p.m.



COMPETITIONS.

Police and Fire Station, Redhill.

Designs are invited for the erection of the above buildings at a cost not to exceed £5,000. Premiums of forty, twenty, and ten guineas respectively will be awarded to competitors placed first, second, and third. If the winning design be carried out the author will be appointed architect to the work. An assessor will be nominated by the President R.I.B.A. Accommodation required: Police Station—Office, 16 ft. by 12 ft.; charge room, 14 ft. by 12 ft.; enquiry room, 14 ft. by 12 ft.; spare room, 16 ft. by 12 ft.; lavatory accommodation, 16 ft. by 9 ft.; six cells, 50 ft. by 20 ft.; two bathrooms, etc., 8 ft. by 8 ft.; parade room, 30 ft. by 20 ft.; recreation room, 30 ft. by 20 ft.; found property room, 16 ft. by 12 ft.; weights and measures—verification room, 20 ft. by 16 ft.; and working room, 14 ft. by 12 ft.; ambulance store, 16 ft. by 12 ft.; cycle accommodation, 15 ft. by 10 ft. Fire Station: Engine room, 36 ft. by 30 ft.; recreation room, 20 ft. by 16 ft.; watch room, 10 ft. by 10 ft.; workshop, 16 ft. by 12 ft.; lavatories and bathroom, 15 ft. by 8 ft.; boiler house, 10 ft. by 10 ft.; tower of ferro-concrete, 10 ft. by 10 ft.; two firemen's quarters, each to consist of one sitting-room, one kitchen and scullery combined, three bedrooms, bathroom and lavatory, one washhouse, common to the two firemen, 12 ft. by 10 ft.; drill ground. The foregoing dimensions are in all cases approximate only. Drawings required: Drawings to be to a scale of 8 ft. to an inch and must consist of (*a*) elevations, (*b*) general sections through the main portions of the building (*c*), a plan of each floor, (*d*) block plan showing the disposition of the building, with the drainage shown thereon. A short report is to accompany the drawings, giving a description of the materials and the system of heating and ventilation proposed.

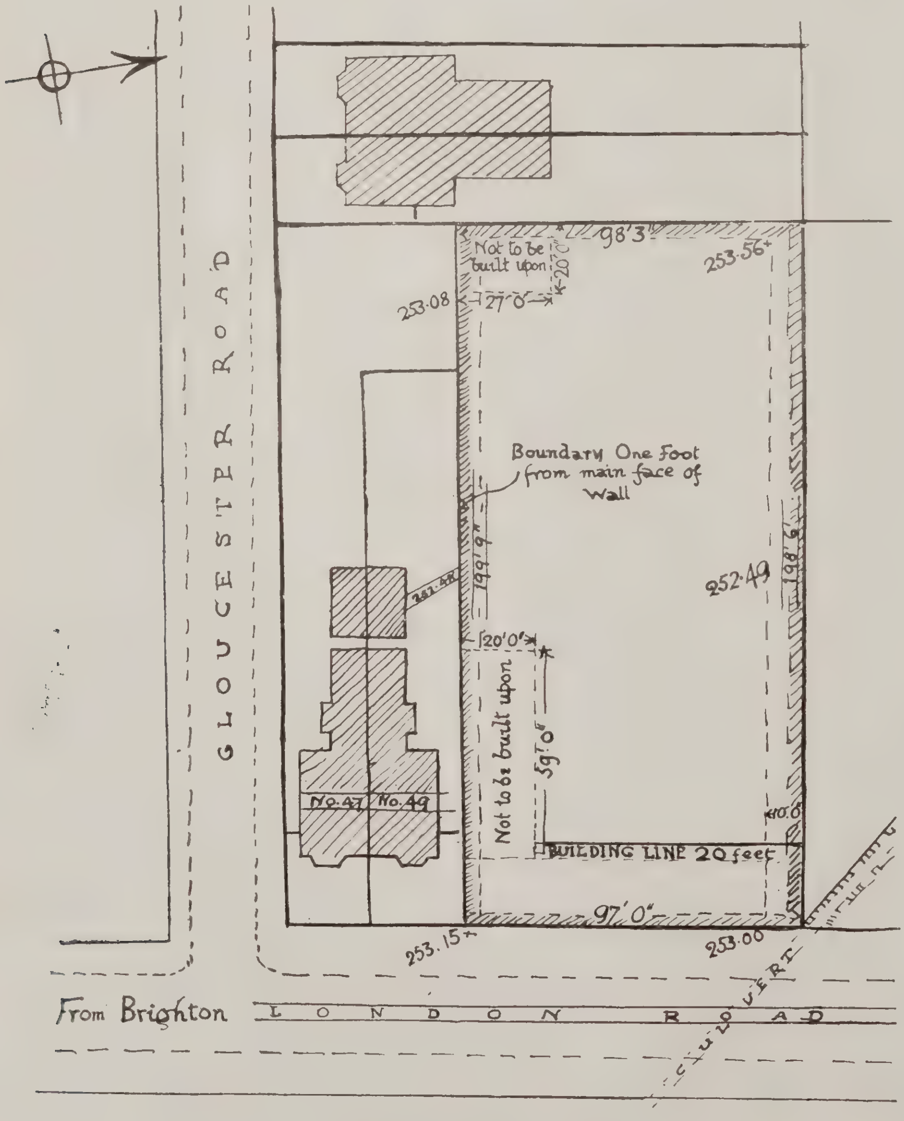
Designs must be forwarded to the Town Clerk, Municipal Buildings, Reigate, on or before July 25 next.

Hostel for Women Students, Newcastle-on-Tyne.

The assessor in this competition, Mr. Walter Brierley, F.S.A., F.R.I.B.A., recommended the adoption of the design submitted by Messrs. Newcombe and Newcombe, of Newcastle, and his award has been confirmed by the Council of Armstrong College, who will invite these architects to carry out the work.

Whitby Saloon and Concert Hall Competition.

Members of the Society of Architects are requested not to take part in this competition without first ascertaining from the secretary whether the conditions are approved by the society.



SKETCH PLAN, POLICE AND FIRE STATION, REDHILL.

THE R.I.B.A. DINNER.

Last Wednesday, in the Victoria Hall o the Hotel Cecil, a distinguished company foregathered at the annual dinner of th Royal Institute of British Architects. O Mr. Blomfield's right sat the Lord Mayo of London, and on his left the Earl o Plymouth. The Earl of Crawford an Balcarres, Lord Redesdale, the Righ Hon. Joseph Pease, Sir Thomas Barlow Sir William Richmond, Sir George Frampton, Sir Arthur Evans, Sir Laurence Gomme, Viscount Esher, the Right Hon John Burns, Sir Thomas Brock, Mr. Frank Dicksee, and the Very Rev. Willia Ralph Inge, Dean of St. Paul's, were among the guests who had places at th table of the elect; Mr. Walter Lawrence Mr. W. Thomas, Mr. Thomas Hardy, Dr T. H. Warren (President of Magdalen College, Oxford), Mr. F. G. Price (President of the Institute of Builders), Mr. H. Chatfeild Clarke (President of the Surveyors' Institution), and the Mayor o Westminster were also present. A fai number of distinguished architects assiste at the occasion. One noticed especiall Mr. H. V. Lanchester, Mr. George Hubbard, Mr. Walter Cave, Mr. A. W. S Cross, Mr. J. A. Gotch, Dr. J. J. Burnet Mr. E. L. Lutyens, Mr. Maurice Webb Mr. Basil Champneys, Mr. Stanley Peach Mr. Gerald Horsley, Mr. Paul Waterhouse Mr. Raymond Unwin, Mr. A. N. Prentice and the popular Secretary of the Architectural Association. Altogether about 17 guests sat down when grace had been said by Dean Inge and sung by a chorus o three professional artists.

After the Royal toasts had been given by Mr. Blomfield and responded to with patriotic fervour, the speech-making of the evening was initiated by Mr. Pease, who had been entrusted with the toast of "Architecture and the Arts." Mr. Pease had something to say of primitive man and the history of art, with a view to showing that architecture is not only the greatest o the arts, but the oldest. The interest of his speech, however, lay in his references to the work of the Board of Education, over which he presides. He was responsible to Parliament for the Royal School of Art and was supposed to take a paternal interest in the provincial art schools. He was not wholly satisfied with the progress made or that they were working on exactly the right lines; but there had been progress and it was mainly due to the generosity of architects and other artists in regard to teaching and advice. (Cheers.) He often felt very sorry for architects in this country. They had to go through a long and arduous training before they were qualified, and afterwards they had to contend with the stupidity and unreasonableness of patrons.

Mr. Pease sat down amid decorous applause, and, after the usual announcement Sir Thomas Brock rose with a sheaf of MSS. in his hand to reply for "Sculpture." British sculpture, he declared, had never been so good as now. This was due to the association of sculptor and architect. Leading architects were sympathetic concerning sculpture, and prospects for the future were bright. Mr. Basil Champneys followed on behalf of "Architecture," and after the several restful minutes occupied by his speech, Mr. Frank Dicksee got up—the light of battle in his eye—to respond for the painters. Mr. Pease had spoken of the art education of the country. There were certain persons called Post-Impressionists, Cubists, Futurists, whom he (Mr Dicksee) did not understand and did no

rove of, and he wished to warn the
sident of the Board of Education to
p his eye on them. All these cults
e built of a spirit that aimed at ob-
ing the wages of labour without labour
fact, at getting ninepence for four-
ce—(Laughter)—and this spirit was
ed with a spirit in the public that was
ry of well-doing, and only wanted its
ed appetite tickled with highly spiced
unwholesome food. There was
ther thing: the country was being de-
ed of its old masterpieces. There
ht to be an export duty on old works of
The proceeds might be handed over
he National Gallery as a supplemen-
grant. A 10 per cent. duty on Rem-
ndt's "Mill" would have meant a very
ful addition to the Gallery's £2,000 a
r. Mr. Dicksee, with his pointed beard
moustache, looks as if he had stepped
of a Hals portrait group, and his digni-
mien gave dignity to a not very impor-
speech.

Ir. Paul Waterhouse had secured "The
d Mayor, the Sheriffs, and the Corpora-
of the City of London" for his share.
made the most of it, and his speech,
-phrased and witty, was undeniably
success of the evening. The antiquity
he Lord Mayor's office was his theme,
Sir Laurence Gomme, who has
ntly dealt very learnedly with this sub-
in his book on London, must have been
rised at the control of the subject
wn by Mr. Waterhouse as he skipped
tly and mischievously across the pages
history. From the remote end of
table, across the breadth of the room,
laimed fellowship with the Lord Mayor
the grounds of a common birthplace.
ou had the excellent idea of being born
Manchester," observed Mr. Waterhouse
congratulatory tone, and paused for
unsuspecting "Hear, hear" which fell
n the Lord Mayor's lips. "But the
e idea," he continued, promptly and
gently, "came to me a year earlier."
ody was more amused by this conceit
the Lord Mayor himself. Through it
Mr. Waterhouse's seriousness of
ession accentuated the fun. He ended
ropping the banter for a warm tribute
he services rendered by the Corpora-
to architecture, more especially in the
ter of St. Paul's.

he Lord Mayor, himself the easiest and
t fluent of speakers, replied. The
poration, though most ancient, was yet
t up to date. They had frequently
sulted with the Institute in matters of
itectural difficulty, *e.g.*, the proposed
bridge across the Thames, and he
ed forward to the Institute's co-opera-
in suppressing vandalism. He pro-
ed the President's health.

r. Blomfield received an ovation on
ng. He began with a gentle correction
ne of Mr. Waterhouse's historical facts
then referred—almost apologetically,
eemed—to what was really "a private
ir of the Institute's," viz., the registra-
question. He sketched the history of
movement up to the endorsement of
charter policy at the last meeting.
re had been criticism, and he welcomed
cism so long as it was not merely de-
ctive. But the Institute was the only
y capable of dealing with the question,
the charter policy, if loyally adminis-
d, would solve the problem and would
lt in great benefits to the Institute and
profession generally in their dealings
the public. A reference to Mr.
est Newton, who was unfortunately pre-
ed by an engagement at Liverpool from
nding the dinner, evoked cheers. Mr. Blomfield said he had no doubt that the new President would be supported—in the charter policy, presumably as in other matters—by the new Council as faithfully as he (Mr. Blomfield) had been supported by the old one.

Mr. Walter Cave, in proposing the toast of "The Guests," reminded his hearers of the services to architecture performed by Lord Plymouth, Lord Crawford, and Lord Esher, the last of whom had been largely responsible for the foundation of the British School at Rome. He also recalled the interesting fact that Mr. Thomas Hardy had architectural leanings at one time and was articled to Sir Arthur Blomfield. A solid, careful speech of facts, useful in crystallising the eminence and virtues of the assembled guests.

Dean Inge, who had been asked to respond, acknowledged Mr. Cave's reference to him as a schoolfellow at Eton. He felt sorry for architects: they could not hide their misdeeds, unless they could silence the Recording Angel by making friends with Suffragettes!

IMPORTANT APPEAL CASE.

Holland and Hannen and Cubitts v. Lord Decies.

In the Court of Appeal, on June 20, Lords Justices Buckley, Kennedy, and Phillimore heard the appeal by the plaintiffs in the action of Holland and Hannen and Cubitts, Ltd., v. Lord Decies, from a reserved judgment of Mr. Justice Bailhache in the King's Bench Division on July 31 last, in which the firm of contractors were awarded £7,035 and the costs of the action, while Lord Decies was to recover £5,121 odd from the contractors, with the costs of the counterclaim, and £350 against the architect. The appeal was proceeding when we went to press.

PROJECTED NEW WORKS.

Town Planning.

Hendon Rural Council have decided to prepare a town planning scheme for the districts of Pinner and Harrow Weald.

Town Hall Improvement, Burton.

The Burton Town Council have decided to improve the staff offices at the Town Hall at an estimated cost of £1,250.

School, Pollokshaws.

The Eastwood School Board have decided to erect a new school at Pollokshaws to supersede Pollok Academy.

Works, Newport.

Plans for the offices of the British Mannesmann Tube Company's new works at Newport have been approved by Newport Corporation.

Co-operative Premises, Hinderwell.

The Hinderwell (Yorks) Urban District Council have passed plans submitted by the East Cleveland Co-operative Society for a new store at Hinderwell.

Mortuary, Wells.

The Wells (Somerset) City Council have approved plans by their surveyor for the erection of a public mortuary near the Town Hall buildings.

School, Aberdeen.

The Buildings Committee of the Aberdeen School Board have decided upon the reconstruction of the Ashley Road School, and plans of temporary buildings have been submitted.

Bridge Building, Argentina.

It is reported by mail that tenders will shortly be invited by the Government of Cordoba for the construction of five bridges in different districts of the province at a total estimated cost of $500,000 paper.

Rectory, Yarmouth.

It is proposed to demolish the present rectory at Yarmouth, which the diocesan architects state it is impossible to repair. A new rectory will be built on an adjacent site at an estimated cost of £2,000.

Houses, Launceston.

The Launceston Town Council have ordered plans to be prepared for the erection of eighteen workmen's houses on the Duchy field at Chapel and six houses on the gardens at North Street, St. Stephen's. Tenders will be invited for the work.

Sea Wall, Rottingdean.

A Local Government Board enquiry has been held into the application of the East Sussex County Council to borrow £2,262 for sea defence works at Rottingdean, near Brighton. There is no opposition to the scheme.

Cottages, Crick, Northants.

The Crick Rural District Council have received the consent of the Board of Agriculture to the sale of three roods of ground in the village for £150 for the council's building scheme. The surveyor has been instructed to prepare estimates and plans for the erection of six cottages thereon.

Asylum Extension, Coxlodge.

The committee of visitors of the Newcastle Lunatic Asylum at Coxlodge have had plans prepared for the extension of the institution by the erection of two villa blocks—each to contain forty patients—an isolation hospital, and a home for fifty six nurses.

Imperial Hotel, Aberdeen.

The Plans Committee of the Aberdeen Town Council have provisionally approved plans submitted by the Imperial Hotel proprietors for the erection of a new building 48½ ft. high, on the site of the existing premises. The annexe will be used for the purpose of providing additional stock rooms and bedrooms.

Breadsall Church to be Rebuilt.

The ancient church of Breadsall, recently destroyed by fire as the result of a Suffragette outrage, is to be rebuilt as soon as possible. Mr. W. D. Caröe, of London, architect to the Ecclesiastical Commissioners and consulting architect to the Derbyshire Church Extension Society, is to report on the state of the ruins and the best lines on which to restore the church.

LIVERPOOL SCHOOL OF ARCHITECTURE ANNUAL EXHIBITION.

The annual exhibition of work by students of the Liverpool School of Architecture, now being held in the school exhibition room at Liberty Buildings, presents some features of exceptional interest, in addition to the usual work of the leading students. Thus, the three large designs by Liverpool students, which have won their way into the Final Competition for this year's Prix de Rome, are shown on big strainers, and the seven town-planning prize drawings are bound to attract a good deal of public attention. With regard to the former, the three men who have distinguished themselves are Mr. E. R. F. Cole, Mr. F. Jenkins, and Mr. B. A. Miller; the work of all of them is familiar to readers of the Journal. Their designs are for an art gallery in a public park, and they all show large, solid, serious, and dignified buildings. Mr. Cole and Mr. Jenkins both show an oblong building with a Corinthian portico. In both cases the latter feature is finely composed and enriched. In measured work Mr. Cole shows a set of drawings of Percier and Fontaine's Expiatory Chapel for Louis XVI., and a drawing of the little building of the Ecole des Arts Decoratives shown in the recent Paris exhibition of English architectural drawings. Mr. Jenkins shows a measured drawing of Messrs. Sewel Bacon's block of premises in Bold Street, Liverpool.

The seven drawings are noteworthy. Sir W. Lever every year gives £50 to the school for the best scheme for a Liverpool town improvement, the site for which he himself selects. The town-planning students in the first instance deal with the site, and then the architectural ones, working on the selected plan, make designs for the actual buildings. This year the site selected was the land below St. George's Hall, including the gardens and the Haymarket property. The winning plan is by Mr. Bogle, who, after simplifying the lay-out of St. John's Gardens, suggests two symmetrical buildings facing St. George's Hall, with a new street and vista to a further building between them. Mr. Miller, developing this idea, has added a bridge between the buildings, so that for municipal or other purposes where communication is essential they could be used as one building. For the end of the vista he has suggested a tower office building, after the manner of a sky-scraper. It is doubtful, however, whether his tower is large enough on plan for practical purposes; there would be but little office space on each floor when the space required for the elevators and staircase is deducted. The tower idea has been adopted by the other students, with the exception of Mr. Threadgold.

The remaining designs include a great variety of subjects, some of which, like a large golf club-house, are executed as working drawings, showing very completely the necessary practical detail. Others, like the designs for "a tower to commemorate the acceptance by the world of the Greenwich meridian," are more imaginative. It will be remembered that Mr. Miller's design for this subject was illustrated in the Journal of March 25 last, and that of Mr. Cole in the issue of April 15.

LONDON'S NEW SCHOOL OF ARCHITECTURE.

The new building (provided by a donor who wishes for the present to remain anonymous) for the School of Architecture established by the University of London was yesterday visited by Prince Arthur of Connaught. This benefaction has enabled the University to prepare a scheme for the combination of the architectural schools of University and King's Colleges which will henceforward carry on their work at University College. Professor F. M. Simpson, F.R.I.B.A., director of the school, is the architect of the new building, which forms part of important additions to University College now in course of construction. The building faces Gower Street, and is provided with three large studios, a museum, a cast gallery, a library, a lecture theatre, a class-room, and an entrance hall. The cast gallery and studios are exceptionally well lighted.

GENERAL ELECTRIC COMPANY'S WORKS AT WITTON.

On Monday of last week a large party of journalists visited Birmingham at the invitation of the General Electric Co. and spent an interesting and enjoyable day inspecting the company's works at Witton, concluding the programme with a visit to the factory in Wheeley's Lane, Birmingham. In the fourteen years of its existence the G.E.C. has established itself as a national institution. If it had no other title to fame, the fact that it possesses and successfully conducts the only arc lamp carbon works in the United Kingdom would give it national importance.

The building is 350 ft. long and 210 ft. wide, consisting of two large well-lighted bays, and is devoted to the production of large electrical plant of all descriptions, smaller sizes of machinery being constructed in a separate shop. Every provision is made for turning out work with the utmost despatch. In the arc lamp works, which are reached by a staircase, one saw the latest design of Angold Magazine flame arc lamp for alternating current circuits. It includes a small transformer, so that single lamps can be run economically from ordinary circuits. A recent addition to the engineering works is a large shop for the construction of fans and small motors. "Freezor" fans of the desk, bracket, and centrifugal types, etc., are manufactured here.

To realise the full extent of the company's output, one has to visit the central stores. The present building is 350 ft. long by 50 ft. wide, and consists of three storeys, giving a large accommodation for the products of the various factories—for everything, in fact, except the heavy electric machinery. As Mr. Hugo Hirst put it, this is an age of specialisation, and the G.E.C. had striven to meet the demands of the age by specialising in everything. Perhaps nothing impresses one with the vast and intricate character of its organisation so much as the simple fact that there are kept in stock in these central stores as many as 30,000 different articles, which are drawn upon daily for the requirements of the company's home and foreign branches. It is impossible, within the limits of a newspaper article, to give a detailed list of the articles manufactured at Witton. One can only summarise them. They consist of electric plant in the largest sizes, including turbo-generators, slow-speed alternators, continuous-current motors and generators, motor-generators, rotary converters, phase advancers, and other similar machines, in addition to switchboards for high and low-pressure work and all classes of switch gear, fans, vacuum cleaners, arc lamps, electric conduit, primary batteries, and arc lamp carbons, all kinds of electric light fittings, and the company's well-known "Magnet" system of electric heating and cooking apparatus.

The latter fittings are manufactured at the Keene Works on the other side of Birmingham—a big corner site building with a floor space aggregating 40,000 square feet, exclusive of stores, offices, etc. Over 550 hands are employed, and all classes of electric fittings, from the small bayonet lampholder to the most elaborate electroliers employed in the illumination of cathedrals, municipal buildings, and large hotels are turned out. One may mention that G.E.C. fittings illuminate the new Adelphi Hotel, Liverpool. On the ground floor is an apparatus of considerable interest: an automatic machine for the manufacture of lampholders. The thing completely produced by the one machine the successive processes are accomplishe before one's eyes. On the first floor ar the spinning shop, chasing shops, etc., an on the second floor electric heating apparatus is constructed, "Magnet" electri fires, ovens, hot plates, kettles, glue pots toasters, and so forth. An important development on this floor is the test room, i which every piece of "Magnet" heatin and cooking apparatus is exhaustivel tested to ensure that it leaves the works i perfect condition.

The fourth floor is devoted mainly t the packing and despatching departmen A new bay to the engineering shop is projected, while other buildings, includin the new test house already referred t mica shops, etc., are in course of construction. The meter works will shortly b moved from Salford, where they are a present, to a large building to be erecte between the present engineering work and the central stores.

It remains only to remind the reade that, in addition to the two factories a Birmingham and the Salford Works, th G.E.C. manufactures metal filament an carbon filament lamps at the Osram an Robertson lamp works in London, as we as electrical accessories of various kinds a Union Street works. There is also a larg cable works at Southampton. Altogethe over 10,000 hands are employed. Th selling organisation of the compan extends over the world.

THE BUILDING TRADE CRISIS.

Although it was not expected that th results of the trade-union ballot on th proposals for settlement of the Londo dispute would be announced until la Friday (and it was not until Monday tha figures were available, and then the were not complete), it was known muc earlier in the week that the terms wou be rejected. Only the stonemasons vote in their favour.

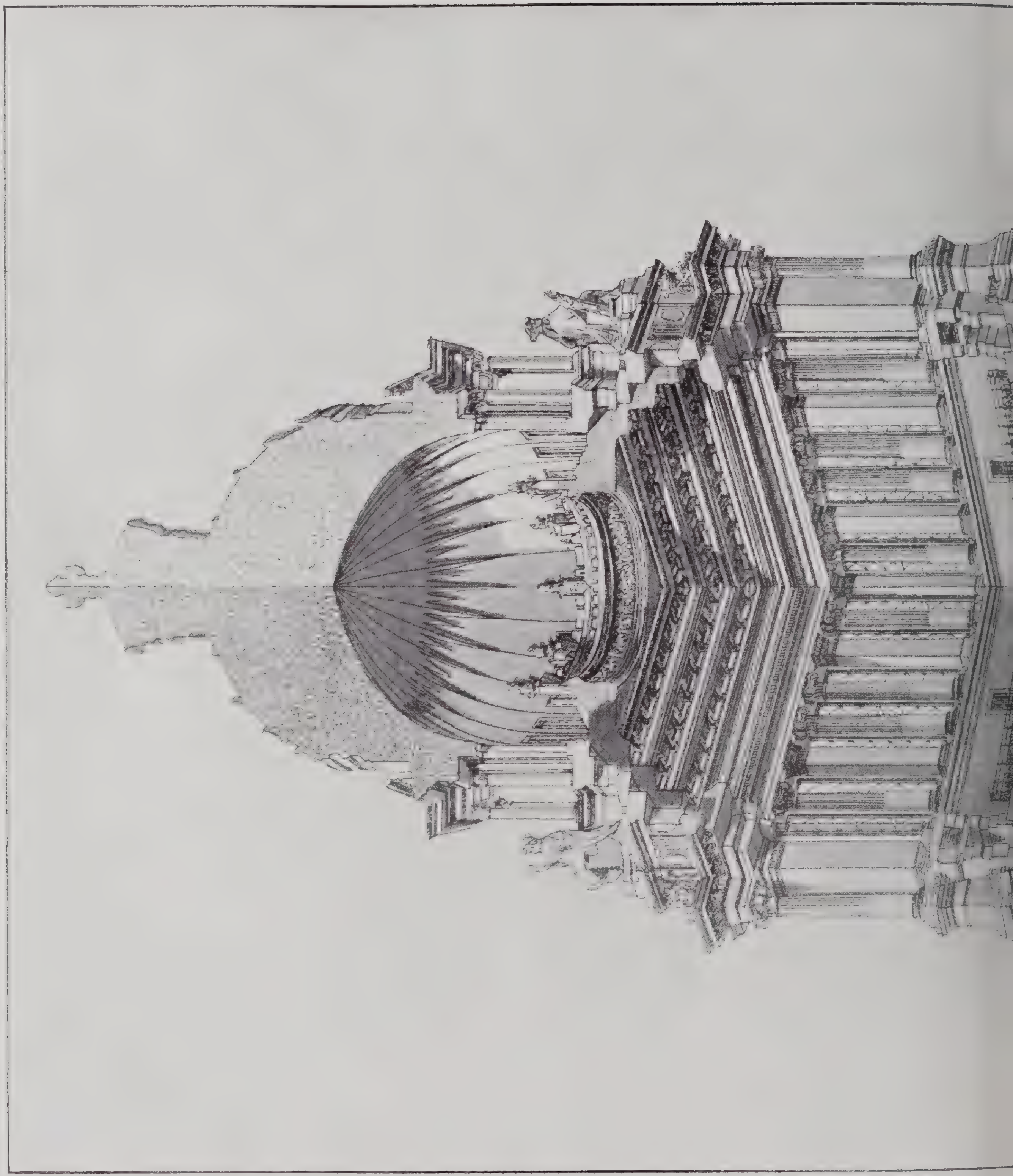
It would appear that, the employe having made every possible concessio compatible with principle, the only outstanding issue relates to clause A of th proposed terms of agreement, which is a follows:

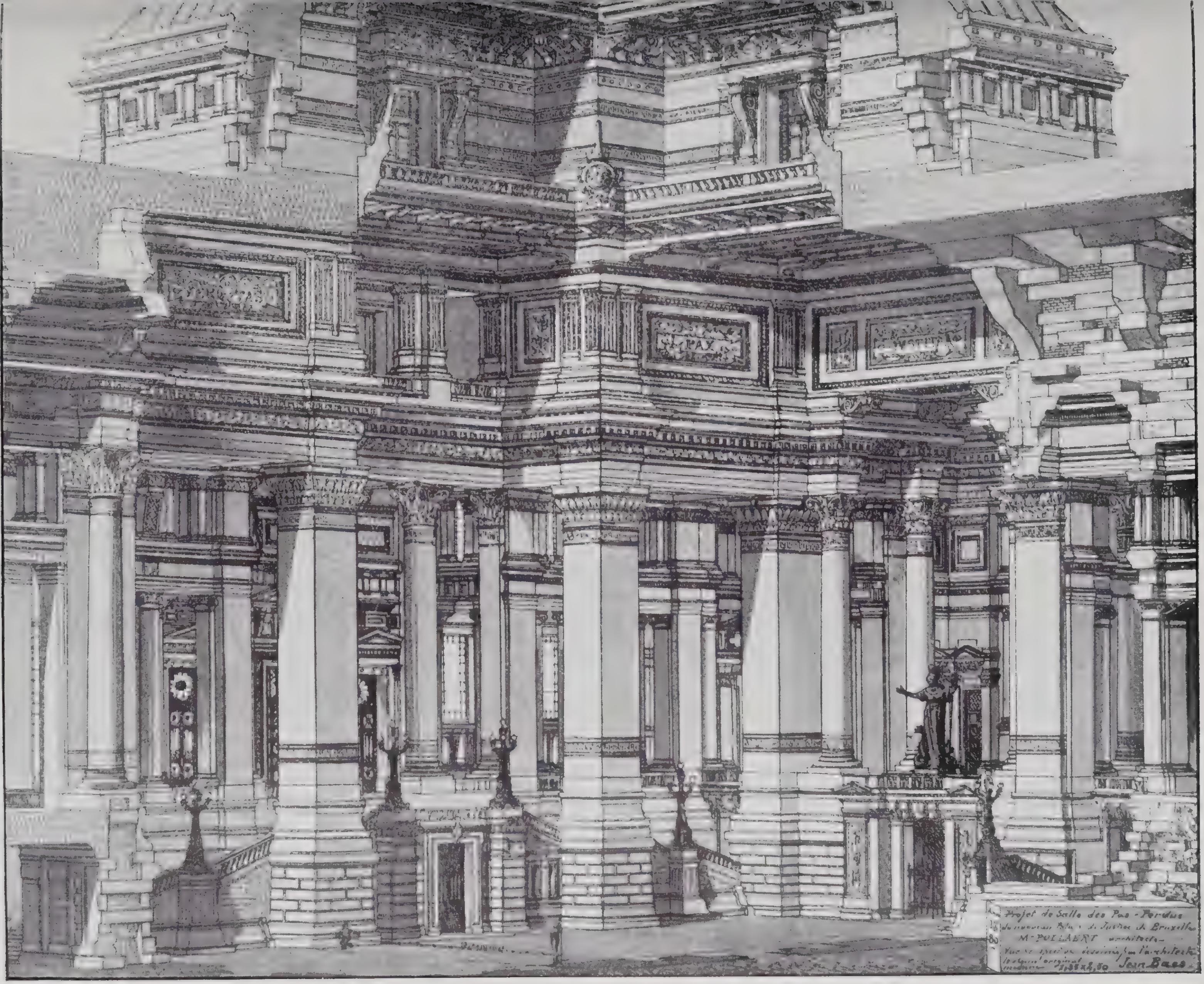
"(*a*) For the adjustment of all dispute and to avoid stoppage of work, it agreed, subject to the observance of the rules, employers shall be at liberty to gi employment to any workman, provid always that nothing in these rules sha prevent an appeal to the Conciliatio Board in the case of an operative wh can be shown to have made himself sp cially objectionable to his fellow-worl men."

That, apparently, does not go fa enough for the men, who, avowed aiming at the extinction of the non unionist, have assumed a position tha they must ultimately abandon, and hav put the entire building industry of th country in grave peril.

Naturally, the result of the ballot being very earnestly discussed by all th executives concerned, but no very important pronouncement is likely to made until the end of the present week.

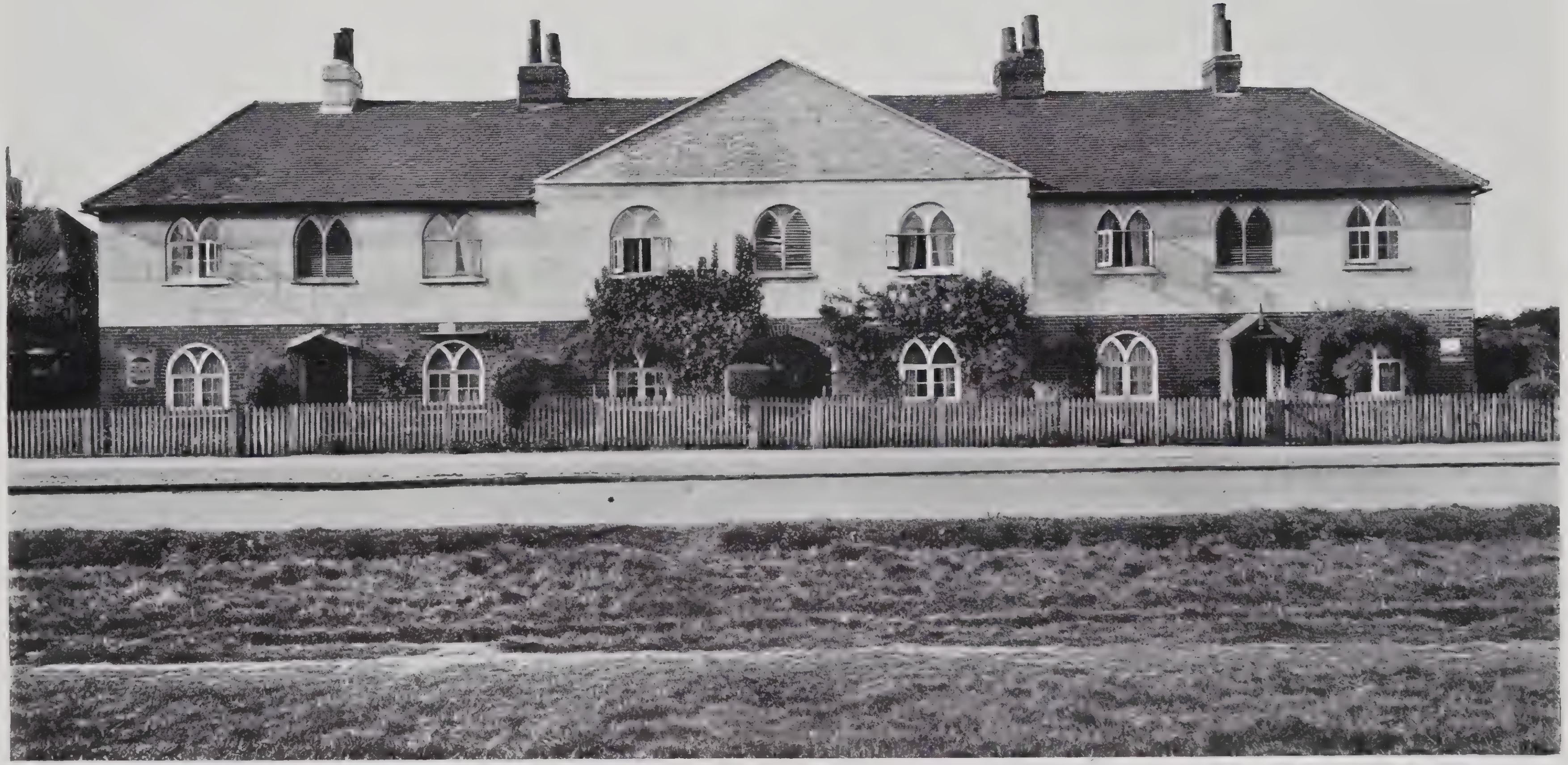
Mr. Barlow Davies, Fellow of the Au tioneers' and Estate Agents' Institute, ha removed from 15, Tithebarn Street, to th Law Association Buildings, 14, Coo Street, Liverpool.



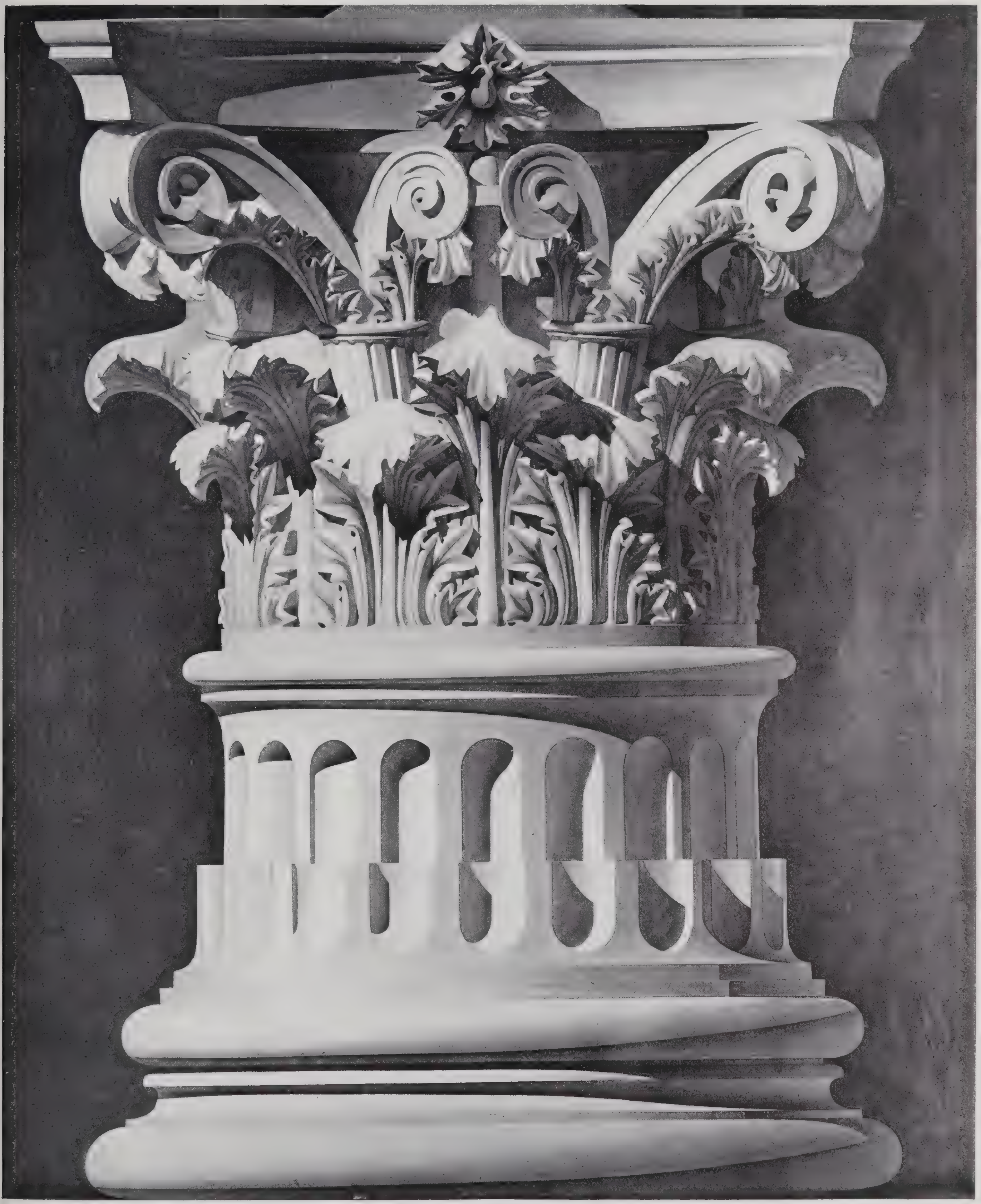

PAX
Projet de Salle des Pas-Perdus
du nouveau Palais de Justice de Bruxelles
M. POELAERT architecte
1,35 x 2,50
Jean Baes

THE PALAIS DE JUSTICE, BRUSSELS. IV.—SECTION.

J. POELAERT, ARCHITECT.



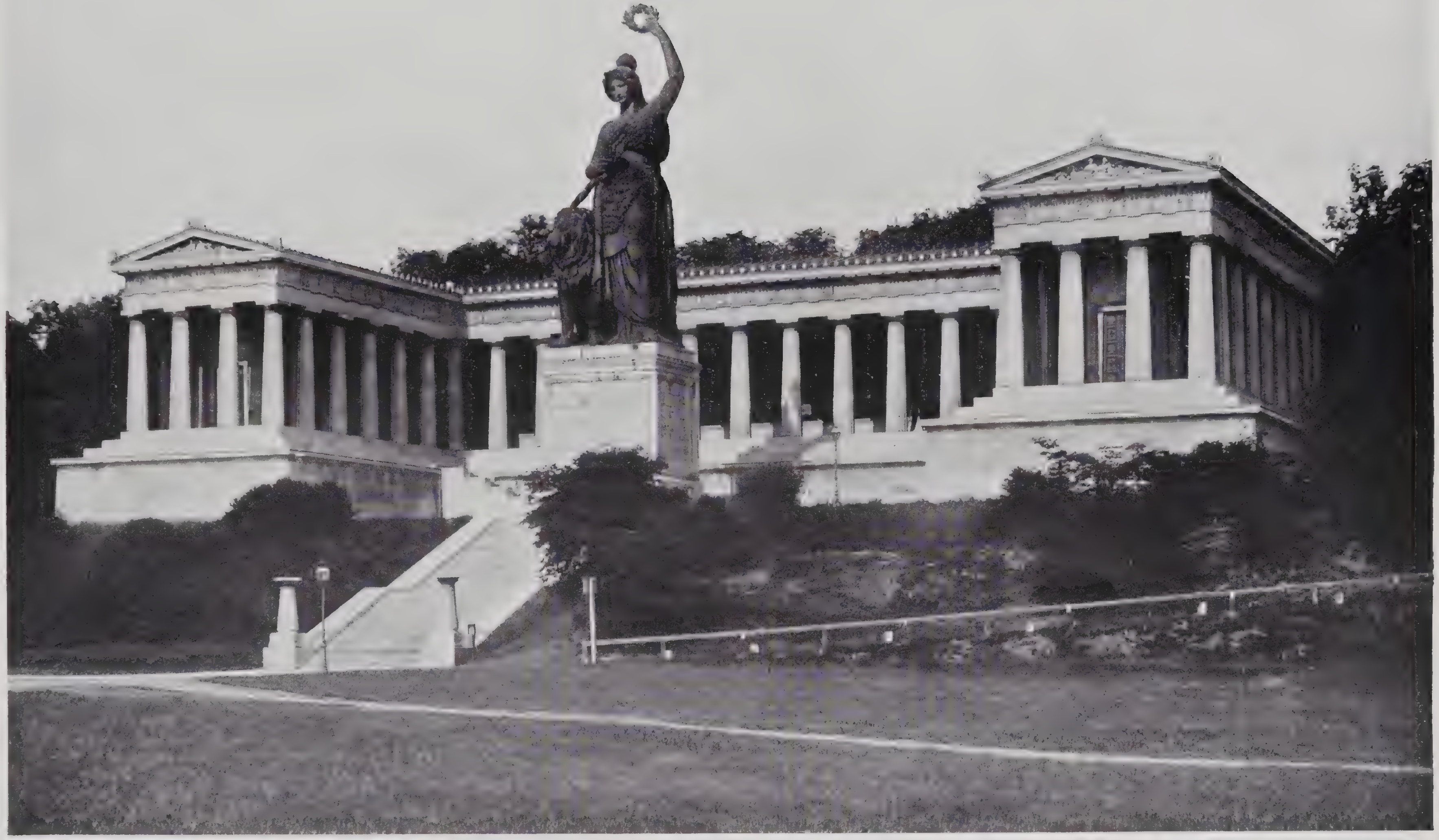
SMALL HOUSES OF THE LATE GEORGIAN PERIOD. XIV.—COTTAGES AT GIGGSHILL GREEN, NEAR ESHER, SURREY.



STUDENTS' DRAWINGS. XXI.—CORINTHIAN CAPITAL, TEMPLE OF CASTOR AND POLLUX AT CORA.

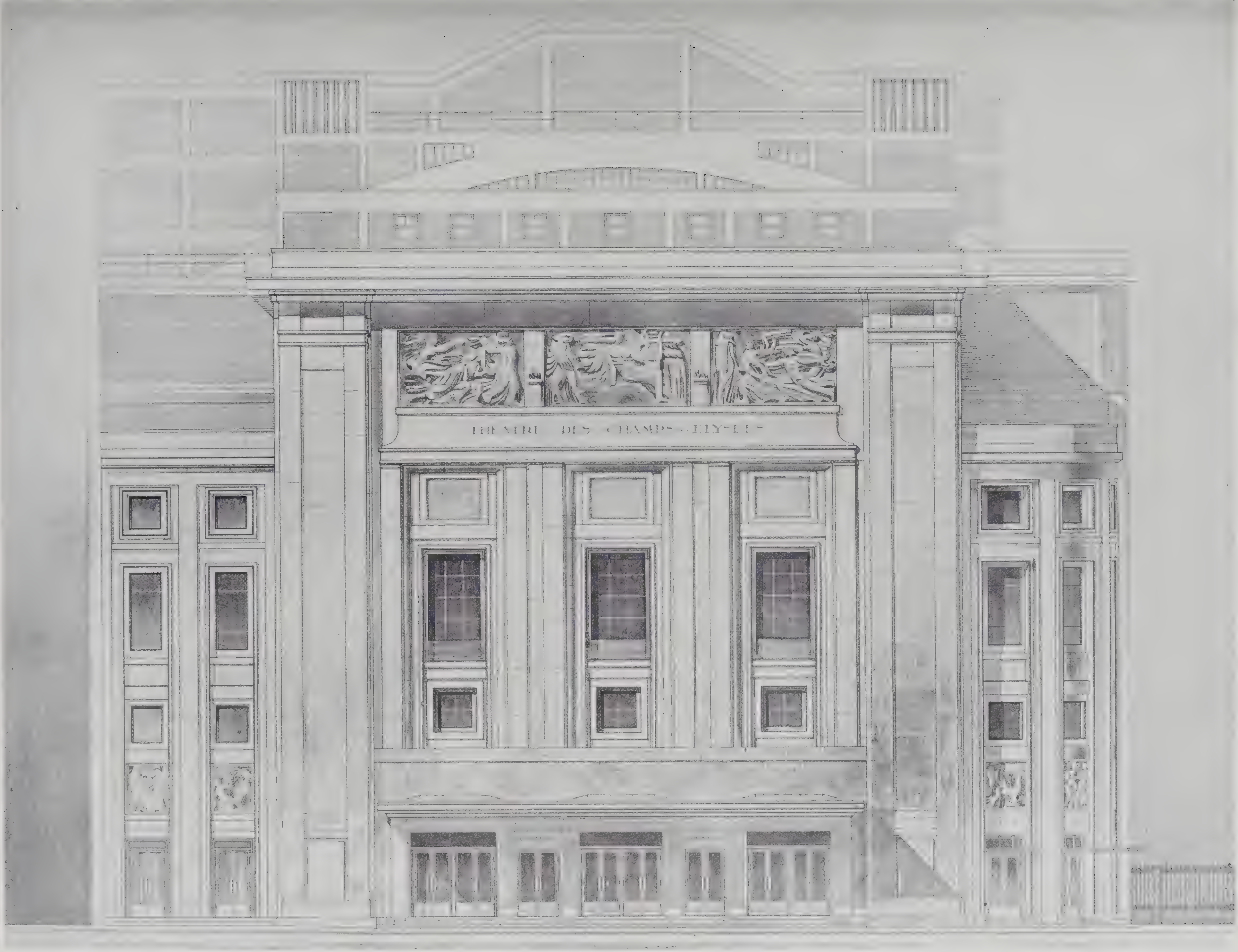
BY EMMANUEL BRUNE.

(Reproduced by courtesy of the Massachusetts "Technological Record.")



MONUMENTAL ARCHITECTURE. XXIII.—THE HALL OF FAME, MUNICH.

VON KLENZE. ARCHITECT.



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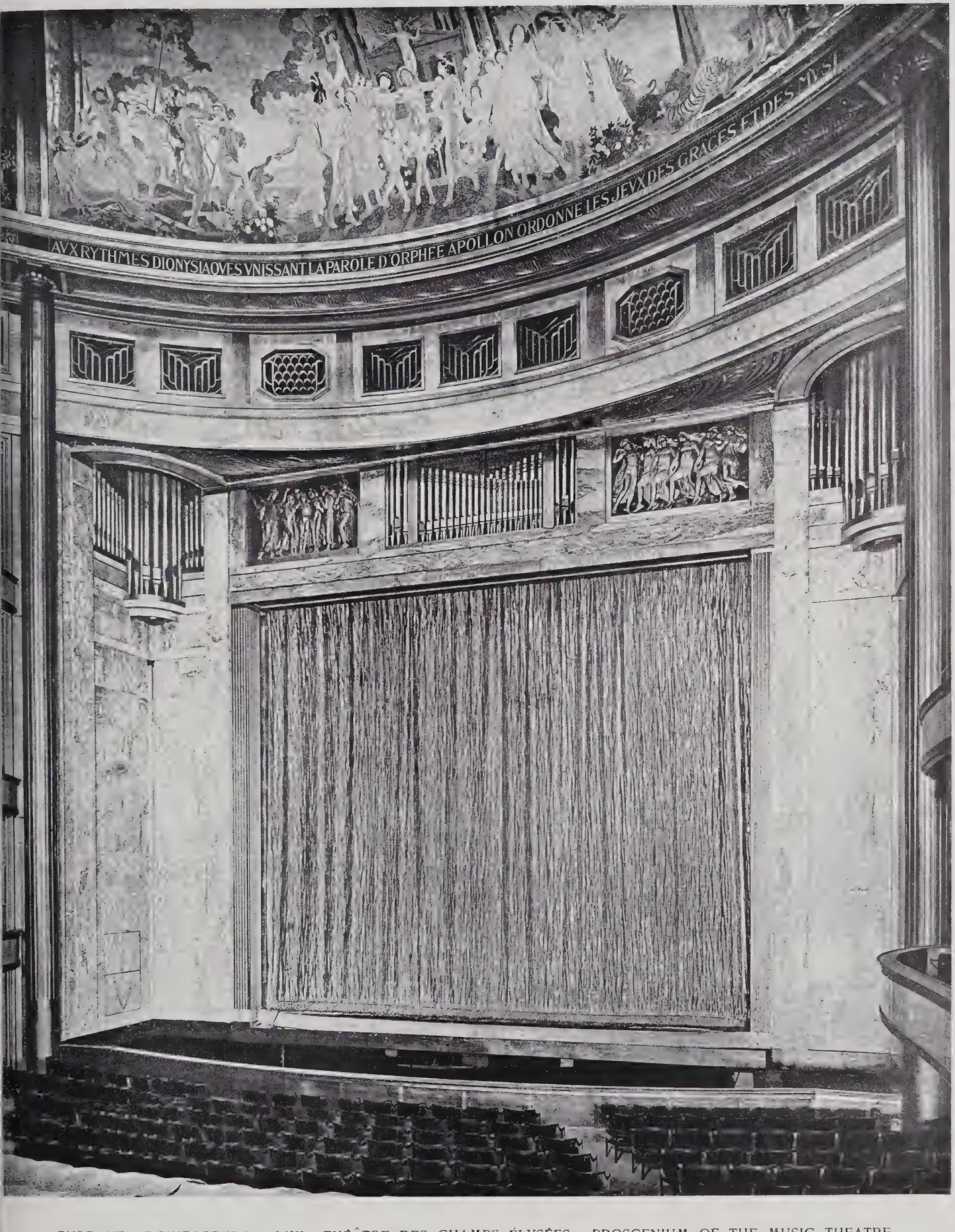

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PRACTICAL CHART OF TOWN PLANNING PROCEDURE.

FOR SCHEMES PREPARED BY OWNERS AND PROPOSED TO BE ADOPTED BY LOCAL AUTHORITIES IN ENGLAND AND WALES UNDER THE HOUSING, TOWN PLANNING, &c., ACT, 1909.

Showing the Detailed Steps of the Various Stages in the Promotion of such Schemes in Accordance with the Town Planning Procedure Regulations (England and Wales), 1910.

Compiled by R IVESON DENHAM, *Assistant Solicitor to the Corporation of Huddersfield*, and L. ST. G. WILKINSON, M.Sc., A.M.I.C.E., *an Assistant Engineer to the Corporation of Huddersfield.*

ABBREVIATIONS.—L.A. = Local Authority. L.G.B. = Local Government Board. C.C. = County Council. Article or Art. = The Articles of the Town Planning Procedure Regulations (England and Wales), 1910. Act of 1909 = The Housing, Town Planning, &c., Act, 1909. Scheme = An Owner's Scheme proposed to be Adopted by an L.A. under the Act of 1909. Authorities for the various Steps appear in Square Brackets and Cross References to the various Columns appear in Round Brackets

No. and Nature of Stage.	Resolutions of L.A.	Notices and Advertisements.	Meetings and Conferences.		Maps and Documents Deposited for Public Inspection.	Information to be Furnished to L.G.B. by Clerk to L.A.		Action by L.G.B.
			Nature.	How Summoned.		Prepared by Surveyor.	Prepared by Clerk to L.A.	
Column 1.	Column 2.	Column 3.	Column 4A	Column 4B	Column 5.	Column 6A.	Column 6B.	Column 7.
STAGE 3. Consideration of Scheme by L.A.	After L.G.B.'s Authority received Resolution to be passed by L.A. authorising Town Planning Committee to adopt a Scheme and to take the necessary proceedings set out in Arts. xii. and xiii.	(*a*) Serve notice of L.G.B.'s Authority to adopt a Scheme, and L.A.'s intention to do so on Owners, Lessees, and Occupiers, and any other Council interested; also upon C.C. if any main road affected. [Art. xii. (*a*) (*c*)] (*b*) Serve similar notice of L.G.B.'s Authority and L.A.'s intention, where necessary, upon (1) Board of Agriculture and Fisheries; (2) Commissioners of Works. [Art. xxviii.] (*c*) Advertise L.G.B.'s Authority and L.A.'s intention in Local Paper. [Art. xii. (*a*) and (*c*)] (*d*) If any land excluded by L.G.B. serve notice of such fact upon Owners, Lessees and Occupiers of such excluded land, and any other Council interested in such excluded land; also upon C.C. if any main road affected by such exclusion. [Art. xii. (*b*)] (*e*) Serve similar notice of exclusion of land by L.G.B. where necessary upon (1) Board of Agriculture and Fisheries; (2) Commissioners of Works. [Art. xxviii.]	Conferences with Owners, Persons, Societies, and Councils interested to consider objections and representations. [Art. xiii.]	As required by Officers concerned of L.A.	After L.G.B.'s authority to adopt a scheme received by L.A. make provision for free inspection of such authority with necessary explanations with regard thereto. [Art. xii. (*d*)]			

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Adnil Novelties.

From the Adnil Electric Company, Ltd., of Adnil Buildings, Artillery Lane, E.C., we have received literature recently published, relating to new designs of "Adnil" fittings, special fittings for half-watt lamps, and small-power motors. The first are all of the semi-indirect pattern, specially suitable for office, shop, and showroom lighting, and also for arcade lighting. They are claimed to give a soft diffused light with entire freedom from any harmful "glare" or heavy shadows, and are supplied in various sizes which may be readily applied to any existing installation without entailing excessive cost or trouble in wiring.

The top reflector is of special design so as to give maximum efficiency, and the lower bowl is of best quality opal, having a very small absorption factor. At the same time it allows sufficient light to pass through in a downward direction for general illumination purposes. The globe need not be removed for cleaning, as the nickel-plated rod on which it is suspended can be turned up at right angles.

The standard design is made in four diameters, varying from 16 in. to 21½ in., and provided with spiders for taking from one lamp of 50 c.p. up to 6 lamps of 100 c.p., according to size. In order to give the fittings a more pleasing appearance, metal reflector and globe bands can be had, when required, in several designs and finishes. For those who require designs of more ornamental type than the standard design, suitable for drawing-rooms, public rooms, etc., the Adnil Company offer a series of fittings with decorated bowls having reflector bands of pierced drawn brass, and cast brass mouldings for the globes. Then the standard fittings can be had with cut-glass bowls obscured inside in several sizes, and to crown all, a beautiful example of fitting is shown, with real hand-carved English alabaster bowl and decorative reflector, to take up to six lamps of 50 c.p.

The fittings for half-watt lamps are designed for various purposes, and are mechanically strong and durable. A special feature is made of watertight outside fittings for street-lighting, etc., for shop windows with hinged globes, reflectors, and chain-suspended globes. An indoor fitting, very useful for shops, factories, etc., is attractive-looking, whilst a practical design is the all-white fitting with rainproof porcelain holder.

A distinct novelty is the semi-indirect half-watt fitting, comprising white-enamelled metal reflector and plain opal or special diffusing globe. It is claimed that with this combination it is now possible to light an interior semi-indirectly more cheaply than by the most efficient direct lighting systems hitherto available.

In conclusion, the list of small motors comprises powers from 1-40 to 1-6 h.p., both vertical and horizontal, continuous and alternating, with sewing machine equipment as extras. These little machines should prove useful for a variety of purposes, and as they are claimed to be efficient and are listed at reasonable prices, they should find a ready sale.

The Lavigne Unpickable Electric Lock.

This is a device of French manufacture, sold by the New British Ever-Ready Co., Ltd., of Hercules Place, Hollowa to whom we are indebted for a beau fully got-up pamphlet, printed in Par and somewhat quaintly written. Whi the actual construction and operation the lock is not clearly described, it evident that the object of the device is defeat burglars, and apparently mu ingenuity has been exercised in the desi of the various kinds of locks to suit purposes. The Lavigne lock can be co nected to any existing circuit of electr bells, and it is claimed to be unpickabl firstly because of its construction, a secondly because it sets electric be ringing the moment any attempt is ma to pick it. This is said to be the ca even if a stolen key or an insulating k is employed. In addition, it is impossib to leave the premises (to close the doo without setting the alarm device. Th shutter latch rings when opened from t outside, but not when opened from t inside (this is important for the securi of a house during the daytime); bot spring and shutter latches can be lock at the same time from inside an outside, by closing the spring latch; doo cannot be cut out because of the metho of wiring. From the illustrations, th locks are apparently well made an finished, and the prices do not see extravagant. There should certainly a demand for this device, particularly f suburban property and country houses.

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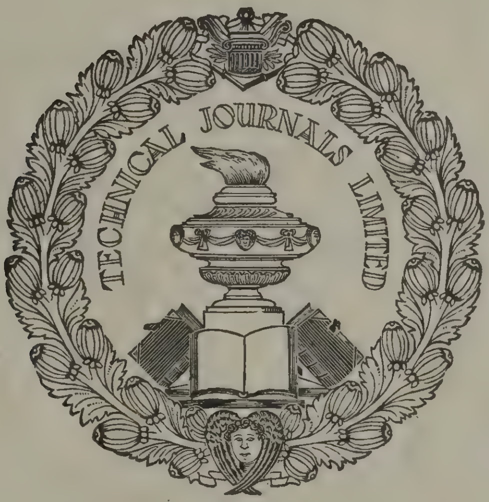

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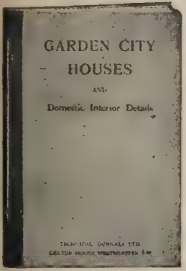

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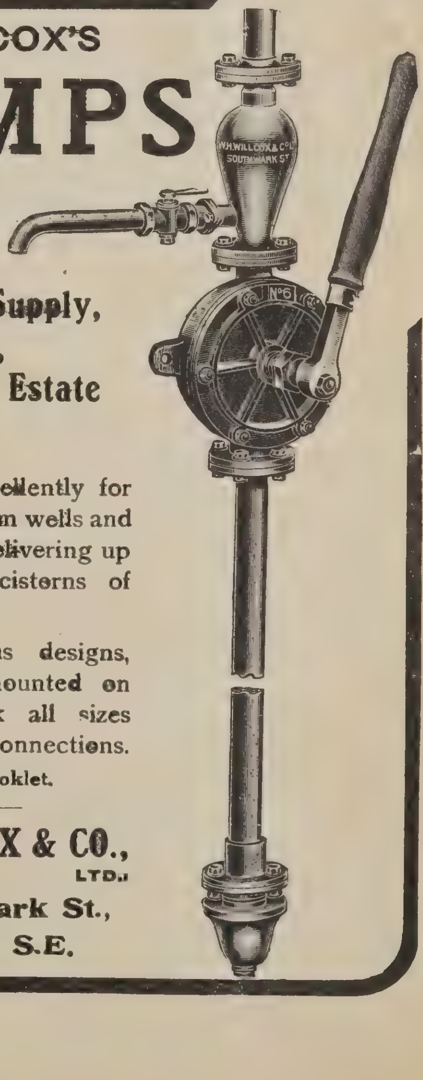

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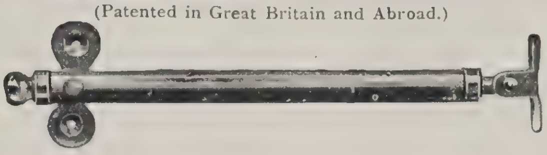

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Unless expressly stated to the contrary, all deposits required for bills of quantities, etc., are returned on receipt of *bona-fide* tenders. The words "Fair Wages Clause" inserted in certain paragraphs signify that persons tendering must conform to a fair wages clause in the Contract, which requires them to pay the rates of wages current in the district.

BUILDING.

June 26. — **ALTERATIONS. Crossgate.**—lterations to premises, Crossgate, for the ommittee of the Durham City Workmen's ub and Institute, Ltd. Plans, etc., with H. Graddon, Architect, Market Place, Durham. enders to W. Hollis, Secretary.

June 26.—**SANATORIUM. Bristol.**—Erection a consumptive sanatorium at Ham Green, r the Bristol Corporation. Specification, rawings and quantities from the City ngineer and Surveyor's Office, 63, Queen quare, Bristol, on deposit of £3 3s.

June 26.—**ALMSHOUSES. Ulpha.**—Erection ten almshouses at Ulpha, Cumberland, for e Trustees of the late John Gunson. Plans, uantities and specifications from Stephen haw, F.R.I.B.A., Malcolm G. Shaw, L.R.I.B.A., oint Architects, 45, Highgate, Kendal.

June 27.—**COTTAGES, ETC. Sutton Bridge.** Erection and completion of four pairs of ttages and outbuildings in Sutton Bridge, for the Sutton Bridge U.D.C. Plans and specifications and quantities with A. W. and H. J. Wilson, A.A.R.I.B.A., Architects and Surveyors, Cumbergate, Peterborcugh, upon deposit of £1 1s. Tenders to Leopold C. Harvey, Clerk to the Sutton Bridge Urban District Council, Spalding.

June 27.—**HOUSES. Melksham.**—Erection of six dwelling-houses at Scotland Road, Melksham, for The Avon India Rubber Co., Limited, Melksham. Plans, specifications, and particulars, at the Offices of the Company, and with W. H. Skinner, Architect, Westbury Leigh, Wilts.

June 27.—**GARAGE, ETC. Huddersfield.**—Erection of a garage, storage shed, retaining wall, and subsidiary works adjoining the Tramway Power Station at Longroyd Bridge, for the Huddersfield Corporation. Plans, specifications, quantities and forms of tender from K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel Street, Huddersfield. Tenders to J. Henry Field, Town Clerk, Town Hall, Huddersfield.

June 27.—**HOUSES. Barnsley.**—Laying of sewers and for all or any trades in the erection of the First Block of four houses, on the building estate, Clayton West. Quantities and plans with F. Kirkinshaw, Architect, 20, Eldon Street, Barnsley, to whom tenders are to be sent.

June 27.—**HOUSES. Merthyr Tydfil.**—Erection of eight houses at Grawen, Brecon Road, for the Grawen Building Club. Plans and specification with O. P. Bevan, PA.S.I., Architect, Express Chambers, Merthyr Tydfil. Tenders to B. Vaughan, 49, Glebeland Street, Merthyr Tydfil.

June 27.—**REPAIRS, ETC. Tunbridge Wells.**—Execution of redecorations and repairs, etc., at the Tunbridge Wells Technical Institute, for the Kent E.C. Particulars from J. Lister, Local Secretary, Technical Institute, Tunbridge Wells, and at the Offices of the Committee, Sessions House, Maidstone.

June 27.—**REPAIRS. Wilmington.**—Execution of summer repairs at Wilmington Council School, for the Kent E.C. Specification and further information with the Correspondent, 8, Hythe Street, Dartford, Kent, and at the Sessions House.

June 27.—**ALTERATIONS. Lewisham.**—Alterations and repairs at the Granville Park Hostels, 31-37, Granville Park Road, Lewisham, for the Kent E.C. Particulars at the Offices of the Committee, Sessions House, Maidstone.

June 27.—**POINTING, ETC. Grimethorpe.**—Pointing at Grimethorpe Council school; also pulling down urinals, etc. Specification from P. Beaumont Divisional Clerk, 128, Northgate, Wakefield.

June 29.—**SCHOOL. Hindley.**—Erection of a Council school off Moss Lane, Platt Bridge (to accommodate 450 scholars), for the Hindley E.C. Plans and quantities with Oswald P. Abbott, Surveyor, Education Office, Hindley. Deposit £3 3s.

Contracts continued on page viii.

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June 27.—**CLASSROOM, ETC. Pembroke Dock.**—Construction of a new classroom and carrying out certain alterations at the Llanion schools, Pembroke Dock, for the Pembroke E.C. Plans and specifications at the Town Clerk's Office, Pembroke, and full particulars from K. McAlpin, Architect, Pembroke Dock.

June 29.—**CHILDREN'S HOME. Poringland.** Erection of a children's home at Poringland. Plans and specifications by J. B. Panks, Architect, Framlingham Pigot, Norwich, and with W. E. Ripley, Clerk to the Guardians, 6, Tombland, Norwich. Deposit £1 1s.

June 29.—**SCHOOL. Cambridge.**—Erection of a school at Chedworth Street, Newnham Croft, Cambridge. Plans, specifications, quantities, and forms of tender with the Education Secretary, Guildhall, Cambridge, on deposit of £5.

June 29.—**COTTAGES. Treharris.**—Erection of twenty or more cottages with ten villas on football field, Treharris, for the Grove Building Club. Plans and specifications with Edward W. Davies, Architect, and Surveyor, Treharris.

June 29.—**HOUSES. Swansea.**—Repair to and the completion of twenty-six houses at Trewyddfa Common, Swansea, for the Corporation. Plans and specifications with H. C. Portsmouth, M.S.A., Architect, Llanfair Buildings, St. Mary Street, Swansea, on deposit of £1 1s. Tenders to H. Lang Coath, Guildhall, Swansea.

June 29.—**RECTORY. Ballygawley.**—Erection of a rectory at Ballygawley, Co. Tyrone, for the Rev. J. F. Fairbanks. Full particulars from S. Jervois, M.R.I.A.I., Diocesan Architect, Armagh.

June 29.—**ALTERATIONS, ETC. Finsbury, E.C.**—Alterations in the offices and sanitary conveniences. at the Finsbury Town Hall, Rosebery Avenue, E.C. Plans, specification and quantities at the Borough Surveyor's office, Town Hall, on deposit of £5 5s.

June 29.—**VARIOUS WORK. Devon.**—The following, for the Devon E.C., at their Council schools: Ashburton—Tar paving, etc. Ashwater: Hunscott.—Repairs and alterations, etc., to offices. Bradworthy.—Ventilation, erection of a covered shed and iron fencing. Hatherleigh.—Tar paving, etc. Ivybridge.—Slating, painting, and repairs, etc. Plymstock: Goosewell.—Tar paving, etc. Uffculme: Ashill.—Alterations to windows, etc. Westleigh.—Tar paving, etc. The drawings, specifications, and conditions at the respective schools. Tenders to the Architect's Office, 1, Richmond Road, Exeter.

June 29.—**ALTERATIONS. Felling.**—Alterations at Felling Council School. Plans and specification with C. W. Hall, Architect, Council Buildings, Felling-on-Tyne, Durham.

June 30.—**GATES AND PALINGS. Minety.**—Purchase and removal of gates and palings at St. Leonard's Church and School. and supply and erection of new.—E. E. Taylor, Clerk to the Council, Minety, Wilts.

June 30.—**FORTY-FIVE HOUSES. Seaham Harbour.**—Erection and completion of forty-five houses, together with all road, sewer, and fencing works in connection therewith, for the Seaham Harbour U.D.C. Plans, specification, and quantities from W. R. Robinson, Asst. Surveyor, Council Offices, Seaham Harbour, on deposit of £1 1s.

June 30.—**RESERVOIRS. Laleham.**—Construction of two storage reservoirs in the Thames Valley, near Laleham and Littleton, together with intake works on the banks of the River Thames, and certain contingent works, for the Metropolitan Water Board. The embankment of the reservoirs will be five miles in length, and will contain about 4½ million cubic yards of earthwork. Plans, forms of tender, conditions of contract, specifications, and quantities from the Chief Engineer, Savoy Court,, Strand, London, W.C., on production of an official receipt for the sum of £50 deposited with the Board's Accountant at Savoy Court, Strand.

June 30.—**FENCING. Epsom.**—Supply and fixing 300 yards or thereabouts of wrought-iron round bar fencing and three pairs of wrought-iron gates at Rosebery Park, Epsom, for the Epsom U.D.C. Plans, specification, and form of tender from E. R. Capon, Engineer and Surveyor to the Council.

June 30.—**CHAPEL. Stratton.**—Erection of Wesleyan Chapel, Stratton, near Dorchester, for the Trustees. Plans and specifications from F. T. Maltby, A.M.I.C.E., Architect and Surveyor, South Street, Dorchester.

June 30.—**CHAPEL. Stratton.**—Erection of a Wesleyan chapel at Stratton, near Dorchester, for the trustees. Plan and specification with F. T. Maltby, A.M.I.C.E., Architect and Surveyor, South Street, Dorchester.

June 30.—**EXTENSIONS. Palmer's Green, N.**—Extensions, etc., at the Southgate U.D.C. offices, Palmer's Green, N., as follows: (1) Heating by hot water; (2) hot water supply; (3) ventilation; (4) wiring, etc. Plans, etc., from C. G. Lawson, C.E., Council's Surveyor, on deposit of £2.

June 30.—**VARIOUS. Armagh.**—Fitting baths, lavatories, w.c.'s, urinals, slop close etc., water supply pipes, etc., and gasfitti work, at the Union Workhouse, Armag Drawings and specification with H. Stephe and Sons, Surveyors, 13, Donegall Squa North, Belfast, and with W. Calvert, Clerk the Union, Clerk's Office, Workhouse, Armag Deposit £1 1s.

July 1.—**REPAIRS. Gloucester.**—Execution ordinary works and repairs to buildings their charge in the Gloucester district duri a period of three years, for the Commissione of H.M. Works. All particulars from t Secretary, H.M. Office of Works, etc., Storey Gate, London, S.W., on deposit of £1.

July 1.—**ALTERATIONS. Abertillery.** Alteration and extension of the Queen Stre Girls' School, for the Abertillery U.D. Drawings and specifications with W. H. Hile, Architect, Chapel Street, Abertillery, an quantities on deposit of £1 1s.

July 1.—**BOILER HOUSE, ETC. Hampstea N.W.**—Erection of a boiler house, chimne shaft, mortuary, etc., at the North-Wester Fever Hospital, Lawn Road, Hampstead, N.W for the metropolitan Asylums Board. Dra ings, specification, quantities, and form tender at the office of the Board, Embankmen E.C., upon deposit of £1.

July 1.—**BUILDINGS. Hull.**—Erection an drainage of certain buildings forming part a tuberculosis hospital, at the Cottingha Castle Estate, for the Hull Corporatio Plans, etc, from Joseph H. Hirst, City Arch tect, Guildhall, Hull, on deposit of £2 2s.

July 1.—**ALTERATIONS. Tralee.**—Addition and alterations to Ballymacelligott Roma Catholic Church. Plans and specification at the Sacristy, St. John's, Tralee, where copie may be taken. Tenders to the Rev. T. Tran P.P., Ballymacelligott.

July 1.—**OPERA HOUSE, ETC. Torquay.**—Erection of opera house, café, and busines premises at Torquay. Particulars from F. Moore, M.A., B.Sc., Associated Architect, and 10 Fleet Street, Torquay.

July 1.—**BUILDINGS. Armley.**—Erection the following buildings at the workhous Armley, for the Guardians of Bramley Union Block for able-bodied men, etc., male an female vagrant wards, and infants' bungalow Names and addresses to F. W. Rhodes and So Architects, Upper Wortley, Leeds. Tenders A. Gaunt, Clerk, 1, Greenhill Road, Armley Leeds.

Contracts continued on page x.

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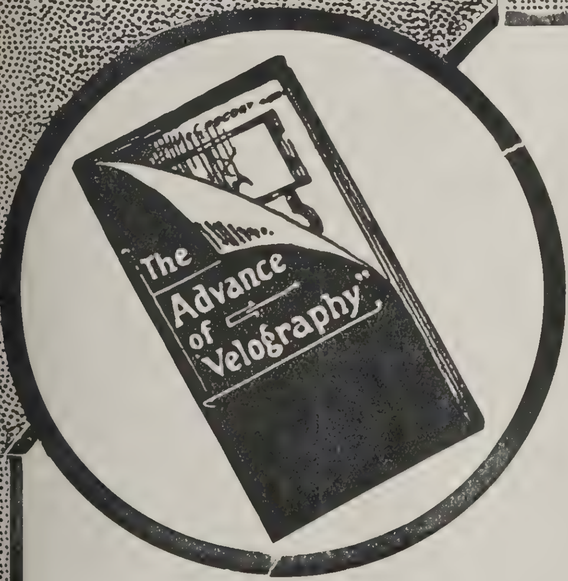

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July 2.—**DRILL HALL. Bath.**—Erection of new drill hall, offices, stores, miniature range, etc., and alterations to the existing Territorial premises in the Lower Bristol Road, Bath, for the Somerset Territorial Force Association. Plans and specifications at the site on application to the Caretaker, and with A. J. Pictor, A.R.I.B.A., Bruton, from whom quantities, forms of tender, and further information may be obtained on deposit of £1 1s.

July 3.—**TEMPORARY BUILDING. London, E.C.**—Erection of a temporary building on property facing Rosebery Avenue, E.C., and incidental works in connection therewith, for the Metropolitan Water Board. Drawings, conditions of contract, etc., with the Board's Surveyor, Savoy Court, Strand, W.C. Deposit £2.

July 3.—**BRIDGE. Warrington.**—Construction of a transporter bridge over River Mersey, for Joseph Crosfield and Sons, Ltd., Warrington. The work includes steel and other work in the superstructure of the bridge, travelling frame, suspended car, motor house and electric equipment. Quantities, etc., from W. H. Hunter, M.I.C.E., 42, Spring Gardens, Manchester, on deposit of £2 2s.

July 3.—**BATHROOMS, ETC.** Tadcaster.—Erection of bathrooms, overhead gangway, and the provision of baths, lavatory fittings, etc., for the Tadcaster Board of Guardians. Plans, specifications, and forms of tender from Bromet and Thorman, Engineers, Tadcaster.

July 3.—**SHOWYARD. Stokesley.**—Fitting-up the showyard for the forthcoming show of the Stokesley Agricultural Society, to be held on September 17. Specifications at the Secretaries' office, Stokesley, Yorks.

July 4.—**ALTERATIONS. Great Clifton.**—Construction of seven new w.c.'s, laying sewers, and alterations to buildings at Mark Pearson's and cottages adjoining, Middle Gate, Great Clifton, Cumberland, where plans and specifications can be seen. Tenders to Mrs. S. J. Read, Castlerigg Farm, Moresby, Whitehaven.

July 4.—**74 HOUSES. Whitehaven.**—Erection of 74 semi-detached houses and construction of roadways, footpaths, sewers, manholes, etc., required in laying out the site at Arrowthwaite, Whitehaven, for the Whitehaven Colliery Co., Ltd. Plans, specifications, etc., from J. S. Stout, M.S.A., Architect, 36, Lowther Street, Whitehaven, on deposit of £5 5s.

July 4.—**BRIDGE. Penybont.**—Erection of a two-span girder bridge at Penybont, for the Abertillery U.D.C. Drawings, quantities, etc., from Lionel D. Lewis, Engineer and Surveyor, Council Offices, Abertillery, on deposit of £2 2s. Fair wages clause.

July 4.—**HOUSE. Wombwell.**—Erection of a foreman's house at the Gas Works, Wombwell, for the U.D.C. Plans, etc., from the Gas Engineer, at the Gas Works, Wombwell.

July 4.—**ALTERATIONS. Felstead.**—Alterations, additions, and painting at the Felstead Rayne Council School, for the Essex E.C. Plan and specification at the school, also at the County Architect's Office, 73, Duke Street, Chelmsford, and with Stephen Giffard, Clerk to the D.S.C., Great Dunmow. No quantities.

July 6.—**REPAIRS. Yiewsley.**—Repairing two cottages adjoining the Council offices, High Street, Yiewsley, for the Yiewsley U.D.C. Specifications on deposit of 5s. Forms of tender from W. H. Lea, Clerk.

July 6.—**COTTAGE. Westbourne (Hants).**—Erection of cottage, for Sewage Works Manager of Warblington U.D.C. at Westbourne, Hants. Drawing and specification with J. W. Loader Cooper, Clerk, 14, Queen Street, Emsworth, Hants.

July 6.—**PUMPING STATION. Watford.**—Erection of a pumping station, including engine house, basement, machine shop, boilerhouse, coal store, filter house, lime store, and softening tank, for the Watford U.D.C. Plans, etc., with D. Waterhouse, Engineer, Council Offices, High Street, Watford, on deposit of £10.

July 6.—**EXTENSION. Merthyr Tydfil.**—Builders' work in connection with the extention of Pant Mixed School, for the Merthyr Tydfil E.C. Particulars from the Borough Architect, Town Hall, on deposit of £1 1s. Tenders to R. Elias, Director of Education.

July 7.—**TWENTY-FIVE COTTAGES. Tunbridge Wells.**—Erection of twenty-five pairs of cottages in various parts of the district, for the Tunbridge R.D.C. Plans and specifications and forms of contract with Frank Harris, Surveyor, The Broadway, Southborough, Tunbridge Wells. Names to Neville R. Stone, Clerk to the Council, 23, Church Road, Tunbridge Wells, by June 22, with deposit of £2 2s. for quantities.

July 6.—**ADDITIONS. Southampton.**—Ere tion of an additional classroom for fift children and making other alterations a Basingstoke Fairfields Council School, for th Hampshire C.C. Plans and specifications (n quantities) with A. L. Roberts, Architect to th Education Committee, The Castle, Winchester Deposit £1 1s.

July 10.—**SCHOOL. Croydon.**—Erection of Council School in Tamworth Road, Croydon, t provide accommodation for 720 scholars, fo the Croydon E.C. Drawings prepared by H Carter Pegg, F.R.I.B.A., of Thornton Heath Quantities and forms of tender from Jame Smyth, Clerk, Education Offices, Katherin Street, Croydon, after June 25.

July 11.—**REPAIRS ETC. Newton Abbot.**—Repairs, painting, etc., to tower, church school, etc., for the trustees of the Newton Abbot Wesleyan Church. Specifications at th church. Tenders to A. E. Dodge, Secretary, 87 Queen Street, Newton Abbot.

July 13.—**ISOLATION HOSPITAL. Hitchin.**—Erection of an isolation hospital for sixteen beds, with necessary administration block laundry, etc., for the Hitchin R.D.C. Quantities from A. E. Parsingham, Clerk to the Council, 5, Bancroft, Hitchin, upon deposit of £5.

July 14.—**ALTERATIONS. Wilts.**—Alteration additions, repairs, and renovations at the Wiltshire County Council Schools during the summer holidays. Particulars from J. Georg Powell, County Surveyor, County Surveyor' Office, Trowbridge

July 15.—**LAUNDRY. Carmarthen.**—Erection of a laundry at the Joint Counties Asylum Carmarthen, for the Committee of Visitors Plans and specification by George Morgan and Son, Architects, 24, King Street, Carmarthen. Names and addresses to W. J. Wallis-Jones, Clerk to the Visitors, 34, Quay Street, Carmarthen on June 27, with a deposit of £3 3s. and statement of recent work done.

ENGINEERING.

July 1.—**BOILERS. Woolwich.**—Supply and fixing complete of two Lancashire boilers, each 20 ft. long by 7 ft. diameter, at the Public Baths, Market Street, Woolwich, for the Woolwich B.C. Particulars from J. R. Dixon, M.I.C.E., Borough Engineer, Town Hall, Woolwich. Fair wages clause.

Contracts continued on page xii.

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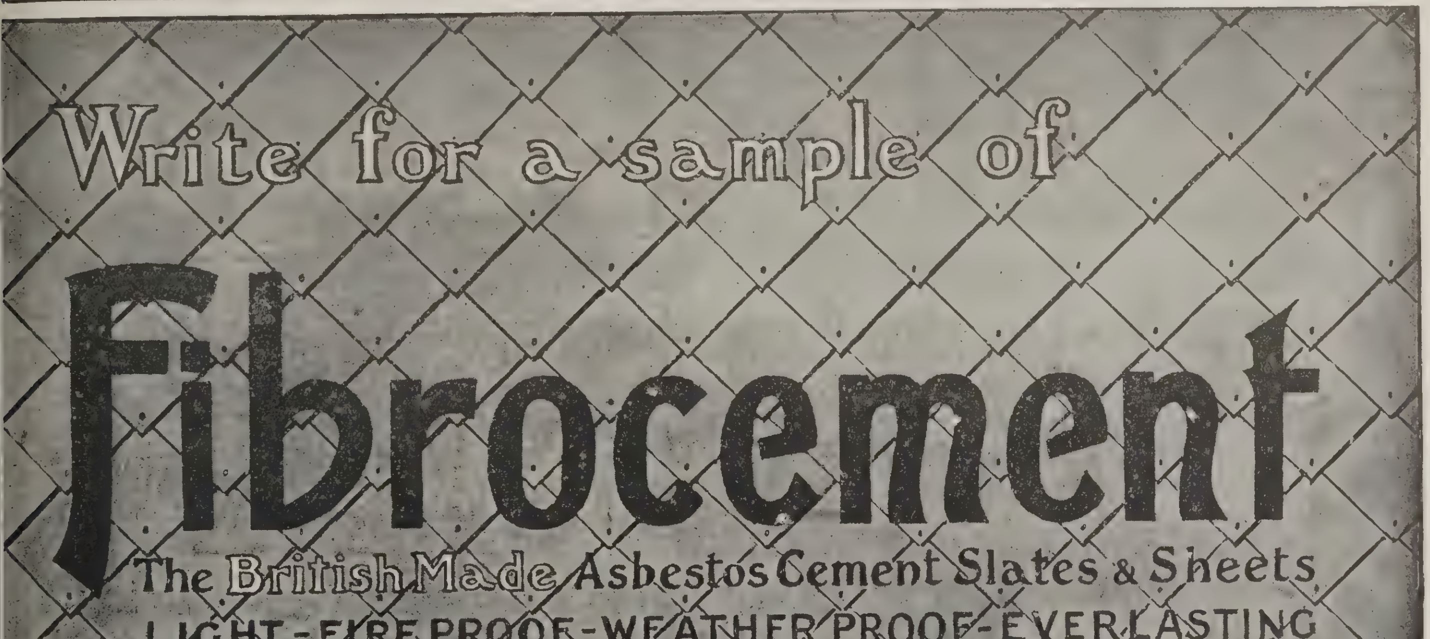

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July 10.—**HEATING. Isle of Man.**—Heating tl Parochial Boys' School for the Rushen Scho Board. Plans and specifications from T. Ra cliffe, Cronkny-Mooar, Port Erin.

July 13.—**BOILER. St. Pancras, N.W.** Supplying and fixing one Cornish boiler King Street Baths, for the St. Pancras, B. Specification, conditions, and form of tend from C. H. F. Barrett, Town Clerk, The Tow Hall, Pancras Road, N.W.

SANITARY ENGINEERING.

June 27.—**SEWERS. Lymm (Cheshire).**—Co struction of 400 lineal yds. of 9-in. stonewa pipe sewers and ten manholes with appu tenant works, for the Lymm U.D.C. Quant ties, etc., with W. M. Beckett, A.M.I.C.E. Engineer, 33, Brazennose Street, Mancheste Deposit £1 1s.

June 29.—**SEWAGE WORKS. Ely.**—Sewag work on the New Barnes Road, Ely, for tl Ely U.D.C. Particulars at the Surveyor Office, Silver Street, Ely.

June 30.—**SEWAGE SEWER. Reading.**—La ing of a sewage sewer from the jam factor to be erected by the Co-operative Wholesal Society, Ltd., on land near the Coley Branc Railway, for the Corporation. Drawing specifications, and forms of tender with J Bowen, A.M.I.C.E., Borough Engineer and Su veyor, Town Hall, Reading.

July 1.—**SEWERS. Walmer (Kent).**—Con struction of about 1,750 yards lineal of stone ware pipe sewers, together with the necessar manholes, flushing chamber, and ventilatin lamps in Wellington Road, Walmer, for th Walmer U.D.C. Alternative prices for 9 in. o 12 in sewers. Plans, specification, and quan tities with H. W. Barker, Engineer and Sur veyor to the Council on deposit of £5.

July 7.—**SEWER. Holsworthy.**—Constructio (in the month of September next of a sewer together with chambers and tank for th drainage of premises at Station-road, Halwill for the Holsworthy U.D.C. Specifications an form of tender from Claude Kinsman, Cler to the Council, 8, North Road, Holsworthy.

July 9.—**SEWAGE WORKS. Ashford (Middlesex).**—Construction of an ejector station, wit pneumatic ejectors and air-compressing plant 240 yards of 6 in. rising main, and a set o sewage purification works, comprising septi tanks, trickling filters, etc., for the manager of the West London District Schools, Ashford Plans and specifications by A. J. Martin M.I.C.E., 7, Victoria Street, Westminster, S.W. and copies of quantities, etc., from F. G. Beeching, Clerk to the managers, Ashford

July 9.—**SEWERAGE WORKS. Burntwood (Staffs).**—Construction of sewage purificatio works, filters, and manholes; also for laying approximately 1,820 yards of 15-in., 4,860 yard of 9-in., and 2,000 yards of 6-in. stoneware socket pipes, and for erecting ventilatin columns, etc., at Burntwood, for the Lichfield R.D.C. Plans and sections with C. O. Rawstron, Engineer, R.D.C. Offices, Workhouse, Lichfield, and specification, quantities, and form of tender on deposit of £3 3s.

July 11.—**SEWAGE DISPOSAL. Barrowford.** —Sewage disposal works at their existing outfall works, for the Barrowford U.D.C. The work is divided into three parts: (1) Conversion of bacteria beds, etc., into septic tanks; (2) supply of three automatic distributors; (3) supply of 2,600 cubic yards of furnace slag for filtering All forms and particulars from F. Sutcliffe, Surveyor, Council Offices, Barrowford. Deposit £2 for each section.

Contracts continued on page xiv.

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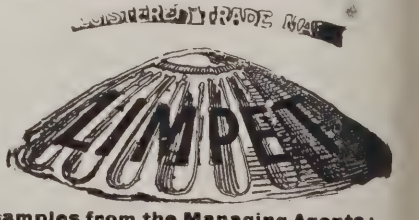

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PAINTING.

June 29.—**PAINTING. Bingley.**—Painting at various Council schools, for the Bingley District E.C. Specifications from R. Leah, Education Office, Bingley, to whom tenders are to be sent.

June 30.—**PAINTING. Weymouth.**—Cleaning and painting various schools in the borough for the E.C. Full particulars from Kenneth J. S. Harris, Surveyor to the Education Committee, Municipal Buildings, Weymouth.

June 30. — **PAINTING. Huddersfield.**—Painting, colouring, etc., of various schools in the Borough, for the Huddersfield Corporation. Specifications, quantities and forms of tender from K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel Street.

June 30.—**PAINTING. Rochester.**—Painting and decorating the interior of the Corn Exchange Buildings, for the Rochester T.C. Specifications and form of tender from William Banks, A.M.I.C.E., City Surveyor, Rochester.

July 1.—**PAINT. Edinburgh.**—Painter work at George Heriot's School, the Heriot-Watt College, and the Trust Offices, for the George Heriot's Trust. Specifications and schedules from John Anderson, Superintendent of Works, Heriot Trust Offices, 20, York Place, Edinburgh.

July 3.—**PAINTING. Cannock.**—Painting, etc., at the Cemetery, Pye Green Road, Cannock, for the U.D.C. Specification with Robert Blanchard, Engineer and Surveyor, Council Offices, Cannock.

July 9.—**PAINTING. Knarsdale** Cleaning and painting of Williamstone Bridge, Knarsdale, for the Haltwhistle District Council. Particulars from H. Murray, Highway Surveyor, Haltwhistle.

July 16.—**PAINT. Barnsley.**—Painting and decorating at the Worsborough Blacker School and the Worsborough Common Council School, for the West Riding E.C. Specifications from and tenders to P. H. Swire, Divisional Clerk, Regent's Chambers, Barnsley.

No Date. — **PAINTING. Chesterfield.**—Colour-washing and painting the interior of the Brampton Council School, for the Chesterfield E.C. Specifications and other particulars at the Education Offices, Foljambe Road, Chesterfield.

MISCELLANEOUS.

June 27.—**STORES. Stalybridge.**—Supply of stores for the Stalybridge, Hyde, Mossley, and Dukinfield Tramways and Electricity Board, for one year. Specifications and form of tender from R. Blackmore, Engineer-in-chief, Generating Station, Stalybridge.

June 30.—**STORES. Ormskirk.**—The following among other work and materials, for one year, for the Ormskirk Guardians: plumbing, etc.; brickwork and materials; joiners' work and materials. Forms of tender from Alfred Dickinson, Clerk to the Guardians, Ormskirk.

June 30.—**STORES., Birmingham.** Supply of following among other stores, for the Birmingham Electricity Department: Timber, building materials, iron and steelware, paint, etc. Particulars from R. A. Chattock, M.I.C.E. City Electrical Engineer and Manager, 14. Dale End, Birmingham.

Late Contracts on page xxiv.

◆

Publisher's Notices.

Offices: ADVERTISEMENT, EDITORIAL, AND COUNTING HOUSE—Caxton House, Westminster. PUBLISHING—6, Great New Street, Fetter Lane, E.C.

Telegraphic Address: "Buildable, London."

Telephones: ADVERTISEMENT, EDITORIAL, AND COUNTING HOUSE—817 Gerrard. PUBLISHING —2200 Holborn (six lines).

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By post in the United Kingdom ...	10	10
By post to Canada ...	13	0
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Advertisements for the current week, alterations to serial advertisements, etc., must reach the office not later than first post on Saturday.

Rates for serial Advertisements Special position, etc., sent upon application.

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Tenders.

Information from accredited sources should be sent to "The Editor," at latest by noon on Saturday if intended for publication in the following Wednesday's issue. Results of Tenders cannot be accepted unless they contain the name of the Architect or Surveyor for the work.

Stockport.—For branch premises, Mellor Street, Cheadle Hulme, for the Stockport Industrial and Equitable Co-operative Society, Ltd. Wrathmell and Blackshaw, Architects, St. Peter's Square, Stockport:—

W. F. Powell	£2,174
Mark Lane	1,900
R. Castle and Sons	1,790
Briggs and Co.	1,770
D. Eadie and Co., Ltd.,* Heaton Norris, Stockport	1,730

*Accepted.

Ballyshannon.—Accepted for erection of thirty-four labourers cottages, for the R.D.C. D. Caffrey, Strabane, £139 per cottage.

Harrogate.—For erection of an exhauster house at the gasworks, Ripon Road, Harrogate, for the Harrogate Gas Co. F. H. Robinson, A.M.I.C.E., Engineer:—

Kershaw and Hill, Skipton Road, Harrogate	£1,940
Jarvis and Sons, London	1,820
A. Hymas,* Harrogate	1,756

*Accepted.

Haywards Heath.—Accepted for erection of cottages, etc., for the Cuckfield U.D.C. T. White, Haywards Heath, £1,285.

Totnes.—Accepted for erection of a territorial drill hall at Totnes. R. E. Narracott, Torquay, £2,428.

Tewkesbury.—Accepted for erection of twelve workmen's dwellings at Tewkesbury, for the Town Council. Mr. Ridler, Surveyor, Station Street, Tewkesbury. T. D. Williams, Hampton, Evesham, £2,160.

Tenders continued on page xvi.

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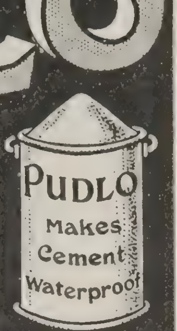

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P.C.B.
104

Nottingham.—Erection of a six-storey warehouse, Canal Side, Nottingham, for the Trent Navigation Co. Heazell and Son, Architects and Surveyors, Nottingham:—

G. A. Pillatt, Nottingham	£11,716
Gilbert and Hall, Nottingham	11,712
Dennett and Ingle, Ltd., Nottingham	11,600
T. Long and Sons, Nottingham	11,550
H. Vickers and Son, Nottingham	11,496
W. Crane, Ltd., Nottingham	11,485
W. Maule and Co., Nottingham	11,340
F. Evans, Bulwell, Nottingham	11,337
T. Bow, Nottingham	11,235
Bosworth and Lowe, Nottingham	11,154
J. G. Short, Nottingham	11,150
Gibbons and Turner, Nottingham	10,950
J. Greenwood, Mansfield, Nottingham,	10,949
F. Perks and Son, Ltd., Long Eaton, Nottingham	10,507
J. Wright, Nottingham	10,378
T. Barlow and Co.,* Nottingham	10,132

*Accepted.

Costessey (Norfolk).—For erection of three pairs of cottages at Costessey, for the Forehoe R.D.C. J. O. Bond, Architect, 29, Castle Meadow, Norwich:—

Tofts, Hingham	£1,342	14	0
English and Sons, Drayton	1,217	14	0
Smith, Bunwell	1,170	0	0
C. W Gunton, Costessey	1,164	15	0
Wathing, Norwich	1,122	0	0
Palmer, Norwich	1,150	0	0
A. E. Palmer, Costessey	1,076	0	0
E. Collison,* Reepham	1,032	4	0

*Accepted.

Midhurst.—Alterations and additions to the Midhurst Grammar School, for the West Sussex and Chichester Joint E.C. H. P. Roberts, F.R.I.B.A., County Education Architect:—

G. A. Luff, Midhurst	£2,142	0	0
F. J. Privett, Haslemere	1,987	0	0
Reeves and Port, Rudgwick	1,967	0	0
H. C. Deane and Sons, Midhurst	1,948	10	0
G. Potter, Horsham	1,896	0	0
Cropley Bros., Epsom	1,894	0	0
A. Burrell and Standen, Littlehampton	1,865	0	0
Thomas and Edge, Woolwich	1,863	0	0
R. Cook and Sons, Crawley	1,850	0	0
A. Peskett and Co., Crawley	1,820	0	0
H. Baker and Son, Horsham	1,805	0	0
Rowland Bros., Horsham	1,799	0	0
J. Longley and Co., Crawley	1,798	0	0
Crosby and Co., Ltd., Farnham	1,779	0	0
F. Sandell and Sons,* Worthing	1,700	0	0

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Newcastle-upon-Tyne.—For extension of the laundry and mortuary, for the Sanitary Committee. F. H. Holford, City and Property Surveyor:—

J. and W. Lowey, Newcastle	£6,040
J. Jackson and Sons, Newcastle	5,753
Middlemiss Bros, Newcastle	5,661
G. C. Carr, Newcastle	5,648
Elliott Bros., Newcastle	5,500
G. Douglass, Newcastle	5,448
J. Douglass, Newcastle	5,308
Kirk and Brown, Newcastle	5,299
J. L. Miller, North Shields	5,290
S. Miller, Newcastle	5,235

Windsor.—For erection of nurses' quarters, for the Guardians:—

W. Goddard and Son, Eton	£1,524	3	5
H. D. Bowyer, Slough	1,429	0	0
R. Love and Co., Sunninghill	1,374	0	0
E. Clarke, Farnham Common, Slough	1,370	0	0
Lavington, Ltd., London, S.W.	1,343	0	0
W. Watson, Ascot	1,327	0	0
J. K. Cooper and Sons, Ltd.,* Maidenhead	£1,312	0	0

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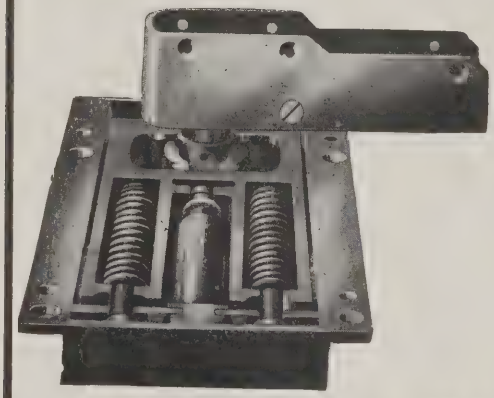

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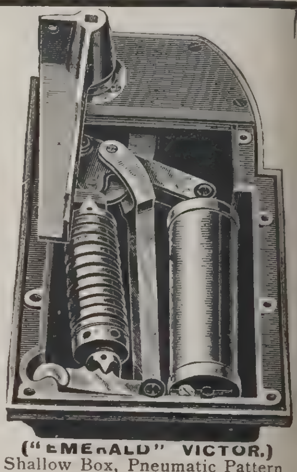

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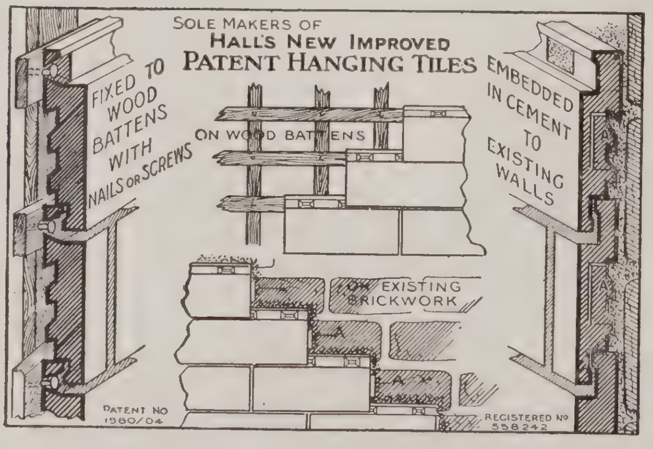

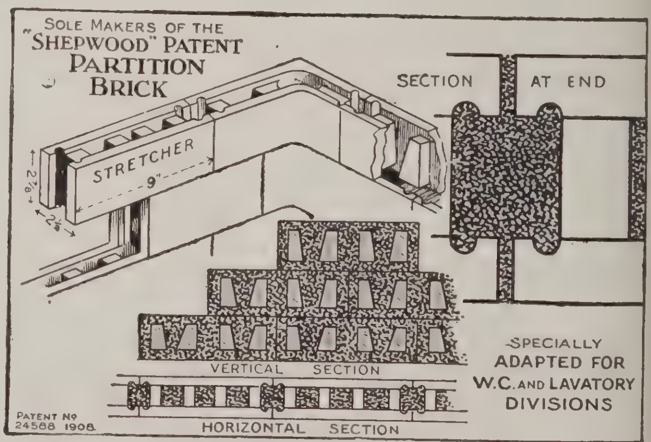

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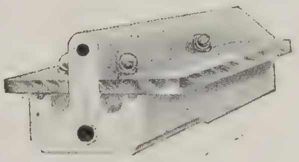

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IN consequence of the large increase in the circulation of "The Journal," the price for Small Advertisements will be slightly raised, the alteration taking effect from the first issue in July—the commencement of a new volume.

It will be readily appreciated that the cost of Advertisements must of necessity rise as the circulation of a publication increases.

Advertisers are purchasing the circulation of a paper in buying space for their announcements, and the larger the circulation is the better must be the results obtained.

The rate for Trade Announcements will for the present remain unchanged.

THE JOURNAL "WANTED" ADVERTISEMENT COLUMNS.

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ARCHITECT and Specialist in Reinforced Concrete work, 17 years in practice, requires an appointment abroad; excellent letters of recommendation from architects, constructional engineers. and builders.—Box 8670.

ARCHITECT and Surveyor (27) holding official appointment, London, requires appointment with view to partnership or immediate partnership with young architect commencing practice; London suburb or Midlands preferred, but not essential; full particulars.—Apply Box 8823.

ARCHITECT and Surveyor (A.R.I.B.A., age 29) seeks re-engagement in London; design, working drawings, specifications, surveys, or supervision; salary £3 3s. weekly or 2s. hourly.—C. B. Smith, 17, Devonport Road, W.

ARCHITECT'S Assistant; competent in all branches; many years' experience on good-class work.—A.R.I.B.A., 10, Evelyn Road, Wimbledon, S.W. 8840

ARCHITECT'S Assistant requires engagement; nineteen years' London, Provincial, and American experience; first-class rapid draughtsman; good practical all-round experience; salary £2 2s. per week.—Architect, 23, Ravenswood Road, Redland, Bristol.

ARCHITECT'S Assistant; 28; varied London and provincial experience in domestic and public work, working and detail drawings, levelling; London preferred.—M., 25, Tylney Road, Forest Gate. 8836

ARCHITECT'S and Surveyor's Junior Assistant requires berth; just completed articles.—Box 8831.

ARCHITECT'S Assistant (A.R.I.B.A.) desires berth; design, general, and detail drawings, surveys, levelling, perspectives, specifications.—Ionic, Box 8827.

ARCHITECT'S Junior (articled) age 20, wishes to improve himself; plans, details, etc., neat draughtsman; excellent testimonials.—Box 8830.

ARCHITECT'S Assistant desires engagement in London; 12 years' experience; would take temporary work, or would do work at own house if required from Architect's sketches.—R. E. Atkinson, 14, Rosslyn Hill, Hampstead, N.W. 8758

ARCHITECT'S Assistant, 3½ years' experience; good draughtsman and knowledge of general building work, requires post in builder's office with a view to gaining experience in costs and quantities.—Apply L. A. Chadwell, "Craigleigh," Iver, Bucks. 8738

ARCHITECT'S Assistant, disengaged June 29, Student R.I.B.A., 5½ years' varied experience, working drawings, details, surveying, levelling; London only.—Seabrook, 10, Willoughby Road, Ipswich. 8740

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Appointments Wanted—*Continued.*

A.R.I.B.A., 26, 10 years' experience, lately chief assistant in busy City office, seeks similar position; medallist design, first-class draughtsman, details and perspective.—Box 8800.

A.R.I.B.A. disengaged; varied London and country experience; design, construction, details, specifications, sanitation, levelling and surveying, quantities.—S., 19, Cecil Road, Wimbledon.

ASSISTANT requires situation in office of large roofing firm; knowledge of quantities, construction, etc; excellent testimonials.—Box 8801.

BRICKLAYER (Jobbing); accustomed to alterations, sanitation, range and stove setting, tiling, pointing, and general repairs; reasonable terms; good references.—A. W., Beechcroft Road, Wandsworth Common, S.W.

BRICKWORK (piece) wanted by competent man; with or without scaffolding; distance no object.—Heirons, Hopper's Road, Palmer's Green. 8804

BUILDER'S General Foreman; has long experience on works of every kind, including Local Government jobs; quick, accurate; good references.—Foreman, Lyncroft House, Lyncroft Gardens, Finchley Road, N.W.

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CONCRETE, granolithic, and rock asphalt wanted; labour only; low prices; workmanship guaranteed; distance no object.—Concretor, 10, Wallwork Street, Higher Openshaw, Manchester. 8824

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FIBROUS-PLASTER WORK.—Expert requires position, or would carry out work by contract. Excellent references as to work done.—Box 8842.

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MANAGING Assistant disengaged, owing to death of principal; expert draughtsman and thorough business experience; London only.—Address Architect, 41, Fetter Lane, E.C.

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The London County Council invites applications for the position of Visiting Teacher of ARCHITECTURAL DRAWING AND BUILDING CONSTRUCTION (vacant in September next) at the L.C.C. Hammersmith School of Arts and Crafts, Lime Grove, Shepherd's Bush, W. The person appointed must have had previous teaching experience and will be required for two evenings a week at a fee of 10s. 6d. an attendance.

Applications must be on forms to be obtained, with particulars of the appointment, by sending a stamped addressed foolscap envelope to the Education Officer, London County Council, Education Offices, Victoria Embankment, W.C., to whom they must be returned by 11 a.m. on Saturday, June 27, 1914. Every communication must be marked T.1. on the envelope.

Canvassing, either directly or indirectly, will disqualify an applicant.

LAURENCE GOMME,
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By order of the Committee.
FRAS. W. CROOK. Secretary.
Sessions House, Maidstone.
June 13, 1914. 8815

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The Metropolitan Water Board invite TENDERS for the ERECTION of a TEMPORARY BUILDING on the Board's property facing Rosebery Avenue, E.C., and INCIDENTAL WORKS in connection therewith

Drawings, conditions of Contract, and general description may be inspected at the Office of the BOARD'S SURVEYOR, Savoy Court, Strand, W.C., on and after JUNE 15, 1914.

Contractors desirous of submitting Tenders may obtain forms of Tender, conditions of Contract, general description, and copies of drawings from the SURVEYOR on production of an official receipt for the sum of £2, which sum must be deposited with the ACCOUNTANT at Savoy Court, Strand, and which will be returned on receipt of a bona-fide Tender together with the above-named documents. Such payments and applications must be made between the hours of TEN a.m. and FOUR p.m. (except on Saturdays).

Tenders, enclosed in sealed envelopes addressed to the CLERK of the METROPOLITAN WATER BOARD, Savoy Court, Strand, W.C., and endorsed "Tender for Temporary Offices," must be delivered at the Offices of the BOARD not later than TEN a.m. on JULY 3, 1914.

The Board do not bind themselves to accept the lowest or any Tender.

A. B. PILLING.
Savoy Court, Strand, W.C.
June 10, 1914.

HITCHIN RURAL DISTRICT COUNCIL.

TO BUILDERS AND CONTRACTORS.
ERECTION OF AN ISOLATION HOSPITAL.

The Council invite TENDERS for the ERECTION of an ISOLATION HOSPITAL for sixteen beds, with the necessary ADMINISTRATION BLOCK, LAUNDRY, etc., on a site adjoining the main road from Hitchin to Letchworth, in accordance with drawings prepared by Mr. H. PERCY ADAMS, 28, Woburn Place, Russell Square, W.C.

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Sealed Tenders, marked "Isolation Hospital," to be delivered to me by July 13, 1914, at this Office.

Tenders will only be received subject to the plans, specification, and the terms of the draft Contract, which may be inspected at the Office of the ARCHITECT.

The Contractor will be required to find security for the satisfactory completion of the work.

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A. E. PASSINGHAM,
Clerk to the Council.
5, Bancroft, Hitchin, Herts.
June 10, 1914

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TO PAINTERS, DECORATORS, AND OTHERS.

The Guardians invite TENDERS for WHITEWASHING, PAINTING, VARNISHING, etc., the Union Infirmary, in accordance with a specification which can be seen at the GUARDIANS' Institution.

The buildings can be inspected and form of Tender can be obtained on and after FRIDAY, 19th instant, between the hours of TEN and TWELVE and TWO and FOUR (Saturdays excepted), on application to Mr. J. T. WHITE, the Master of the Guardians' Institution.

Tenders, inscribed outside "Tender for Painting," must be delivered at the GUARDIANS' Offices, Waterloo Road, Epsom, before SEVEN o'clock p.m., on TUESDAY, the 30th instant.

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ALICK G. EBBUTT.
Clerk.
Gynedale, Waterloo Road, Epsom.
June 17, 1914.

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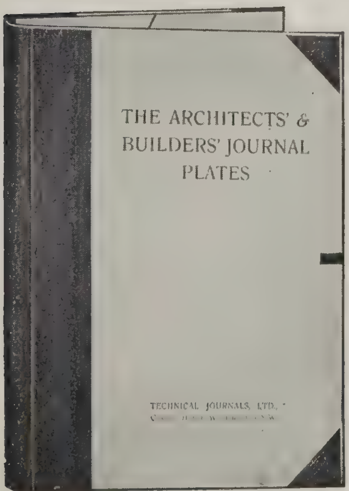

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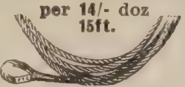

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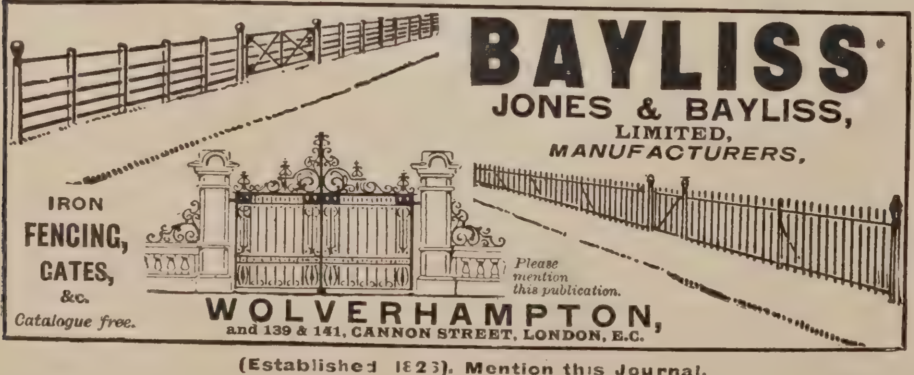

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No date.—**COTTAGE. Ashington.**—For building caretaker's cottage, additions and alterations to dining-hall, etc., at the Harmonic Hall, Ashington, for the Amateur Orchestral Society, Ltd. Plans and specifications from J. Gardner, 5, Council Road, Ashington.

No Date.—**VARIOUS WORK. Yorks.**—The following works at the schools named, for the West Riding County Council: Fitting up a classroom as domestic subjects' centre at Intake Council School; trades—ironmonger, joiner, plumber, and builder. General repairs at Woodhouse West School; joiner and builder. Ventilation hoppers at Birley School. Summer cleaning, etc., at Aughton, Ravenfield, Thrybergh, Dinnington, Anston, Wales, Woodhouse, Gleadless, and Intake Council Schools. Specifications forms of tender, etc., from S. Abson, Education Offices, Woodhouse.

No Date.—**URINAL, ETC. Blackwell.**—The following, for the Blackwell R.D.C.: (1) Construction of a public urinal at Pinxton; (2) construction of a small sewage disposal filter at Palterton; (3) construction of a small sewage disposal filter at Newton. Particulars from Henry Silcock, Surveyor of the Council, 67, Westgate, Mansfield.

No date.—**HOUSE AND CLUB. Creswell.**—Erection of house and club at Cresswell. Plans and particulars from G. Palmer, Creswell, near Mansfield.

No date.—**HOUSES. Trawden.**—Erection of twelve houses in Dean Street, Trawden, for the Trawden Co-operative Society. Tenders are invited for the various works in connection with the building of the above. Particulars from R. S. Pilling, Architect, etc., Dockray Street, Colne.

No date.—**ALTERATIONS. King's Lynn.**—Altering and extending premises (Grosvenor Restaurant) in Norfolk Street and Broad Street, King's Lynn. Plans, specifications, and quantities from Louis F. Eagleton, Architect and Surveyor, King Street, King's Lynn.

No date.—**REPAIRS, ETC. Stroud.**—Repairs and painting at Rodborough and Whiteshill Council Schools. Particulars from R. S. Phillips, Architect, Gloucester. Deposit £1 1s.

No date.—**HOUSES. Saltaire.**—Erection of pair of houses at Saltaire. Names to T. H. Gamble, Architect, 9, Bond Street, Bradford.

No date.—**RESIDENCE. Heaton.** Erection of a residence at Heaton. Names to Jas. Ledingham, F.R.I.B.A., District Bank Chambers, Bradford.

No date.—**BILLIARD ROOM, ETC. Barnsley.**—Erection of a billiard room and certain alterations at the Queen's Hotel, Barnsley, for J. Fox and Sons. Names to Ernest W. Dyson, Licentiate R.I.B.A., Architect and Surveyor, 10, Regent Street, Barnsley.

No date.—**COTTAGES. Grantham.** Erection of two cottages at the Refuse Destructor, Belton Lane, for the Grantham Corporation. Names to the Borough Surveyor, Guildhall, Grantham.

No date.—**PAINTING. Wellow (Hants).**—External and internal painting and decoration and minor repairs at the East and West Wellow Council School and head teacher's house. Specification and forms of tender at the school.

No Date.—**GOLF CLUB. Surbiton.**—Erection of a club house, for the Surbiton Golf Club at The Waffron's, near Surbiton, Surrey. Names and addresses to James F. Palser, Architect, 3, Staple Inn, Holborn, London, E.C.

No Date.—**HOUSES. Belfast.**—Erection of seven houses, off Ormeau Road. Plans and specifications can be seen at the Office of Charles Macalister, Architect, Whitehall Buildings, Ann Street, Belfast.

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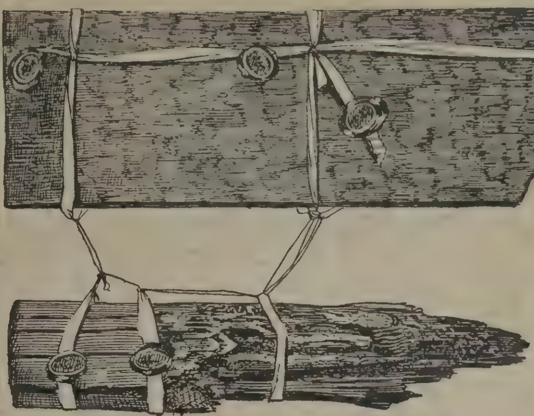

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